

EXPLORING THE ATTRITION OF STUDENT NURSES FROM A FOUR YEAR
COMPREHENSIVE BASIC NURSING EDUCATION PROGRAMME IN A SELECTED
COLLEGE OF NURSING IN KWAZULU-NATAL: A CASE STUDY APPROACH

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DECLARATION

By submitting this thesis titled “Exploring the attrition of student nurses from a four year comprehensive basic nursing education programme in a selected College of Nursing in KwaZulu-Natal: A case study approach” I declare that the entirety of the work contained therein is my own original work and that I am the sole author thereof. All sources used or quoted have been acknowledged by means of referencing. I have not previously submitted this thesis in its entirety or in part for any other qualification.

Signature

Date.....

Shanti Ramkilowan

Signature

Date

Professor N.G. Mtshali

(Research Supervisor)

DEDICATION

This thesis is dedicated to my late parents who laid the foundation for my growth and for who I am today. It is further dedicated to my family and in particular to my baby grand-daughter, Dhiya, as a source of inspiration for her in time to come.

ACKNOWLEDGEMENTS

I thank my Creator for giving me the strength to persevere.

My sincere gratitude and appreciation, to all the persons who gave me the courage and support, directly or indirectly, to complete my studies;

In particular I express my gratitude to my husband who constantly stood by my side with immense patience as I went about my studies;

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My son, daughter and daughter-in-law for their unconditional love and support as I walked through this long journey;

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ABSTRACT

Background: Unlike other traditional professions which struggle to attract post matric candidates, nursing attracts young students in large numbers. However, the throughput is a challenge because of high student attrition.

Study purpose: This study aimed at analyzing attrition of student nurses in a four year comprehensive basic nursing education programme to inform student support initiatives, thereby increasing throughput rates.

Methodology: A pragmatic stance using a mixed methods approach and a case study design was adopted. The nursing college served as the case and two campuses served as the units of analysis. Quantitative data was collected through a self-administered questionnaire from 294 students and document review. Qualitative data was collected from the educators and students through four focus group interviews and two individual interviews.

Results: The study revealed that for every cohort of students admitted to the programme from 2005 until 2012, less than 55% completed within regulation time except in 2011. Trends in dropout revealed that the highest attrition was at first year level (80.6%) and the Anatomy and Physiology course had the highest dropout (72.1%). A significant relationship was revealed between students who repeated a class in secondary school and those who failed and between home language and those who experienced academic failure.

Factors contributing to student nurse attrition ranged from the pre-enrolment phase through to the integration and engagement phases. The main factors cited included that nursing was not the career of choice; the mismatch between what they expected in nursing and what they experienced in reality; an overloaded curriculum; difficult courses; poor study habits and teaching methods. Limited resources and student support both in academic and clinical emerged as contributing factors. A number of *non-academic* reasons emerged from the

quantitative data which were corroborated by qualitative data. The satisfaction level between students that were progressing well and those experiencing failure was not the same.

Recommendations: Student attrition is a complex phenomenon which requires a structured way of addressing it. A well thought out programme of student support is required which should include academic monitoring and tracking of students' progress for early identification of at risk students.

LIST OF ACRONYMS

A&P	Anatomy and Physiology
APS	Academically Progressing well in the Southern campus
AFS	Academic Failure in the Southern campus
APN	Academically Progressing well in the Northern campus
AFN	Academic Failure in the Northern campus
CHE	Council for Higher Education
EAP	Employee Assistance Programme
DOH	Department of Health
DOH-KZN	Department of Health-KwaZulu-Natal
DP	Duly Performed
KZN	KwaZulu-Natal
KZNCN	KwaZulu-Natal College of Nursing
HOD	Head of Department
LRC	Learner Representative Council
NEI	Nursing Education Institution
SANC	South African Nursing Council
TSS	Terminated student in the Southern campus
TSN	Terminated student in the Northern campus

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Contrary to common belief that traditional professions are increasingly being rejected for other fields, the nursing profession continues to attract young people in great numbers (Waters, 2008). According to Waters (2006), there is no shortage of people wanting to become nurses. In the United Kingdom, applications to the Nursing and Midwifery Admissions Service rose by 33% in 2004 and figures from the Universities and Colleges Admissions Service (UCAS) for nursing degree programmes rose by 91% between 2000 and 2005. Nursing programmes, however, continue to lose a vast number of students. A survey conducted in Scotland in 2008 revealed that four out of ten student nurses considered quitting nursing (Kilmarnock Standard, 2008). More than a quarter of students dropped out of their courses in 2006 in the United Kingdom, resulting in an overall attrition rate of 24.8% (BBC news, 2008). A study conducted by Breier, Wildschut and Mgqolozana (2009a) shows that between 1997 and 2006, the attrition rate was 67% amongst various categories of nurses in South Africa.

This challenge is also noted in general education. Higher education institutions continue to face concerns about lower academic achievement and higher attrition rates (Hopkins, 2008). According to Bunting (2004), each year about 15% of the students registered in the public higher education system in South Africa drop out before they graduate, while only 14% complete their qualification. According to Urwin, Stanley, Jones, Gallagher, Wainright and Perkins (2010), students leave for a variety of reasons and therefore no one single reason can be attributed to whether they stay or leave.

Wells (2003) and Stickney (2008) state that attrition of student nurses negatively impacts on the much needed supply of registered nurses to fill staff, administrative and teaching positions. Furthermore, students who discontinue their training suffer considerable psychological, emotional, social and financial loss (Wells, 2003). Favish (2005) noted that whilst an increasing number of students from previously disadvantaged groups are registering for tertiary education, the attrition from these groups is also increasing and attributed this to having opened access without increasing levels of student support (Favish, 2005). In KwaZulu-Natal (KZN), since 2001, the number of student nurses in public nursing colleges has increased from 1000 to 5200 (KZN College of Nursing, 2008). According to the Strategic Plan for Nursing Education, Training and Practice, the throughput of nurses that enter training and actually qualify is informally estimated at about 50% (Department of Health, 2012).

Therefore, although there has been an increase in the number of student nurses admitted to training, the attrition, or dropout, has a significant impact in meeting the supply of health needs. As the phenomenon of attrition is also of significance at the selected College of Nursing, the focus of this study was to explore the attrition of student nurses who have registered for the four year comprehensive nurse training programme at that college.

1.2 BACKGROUND TO THE STUDY

Reports of student nurse attrition from preregistration courses has assumed increasing importance in all parts of the world, including the United Kingdom, Australia and the United States of America (Prymachuk, Easton and Littlewood, 2009; Turner, Yorkston, Stewart, Gaynor and Gallasch, 2006; Glossop, 2001). Trends in attrition rates have reflected that more discontinuation occurs in the first years of study and that mature students have a better completion rate than younger learners (Wells, 2003).

A recent report by the Council of Higher Education, tabled the national pass rate and dropout rate of students enrolled for diploma and degree qualifications during 2005 and 2006 at South African universities which offer contact learning. Only 44% of the students had graduated in regulation time, which is the number of years a full time student is expected to take to complete a qualification (usually three or four years), and 40% had dropped out by the end of regulation time. It was also estimated that even if given extra time to a maximum of 5 years, 45% would never graduate. The rate of attrition in first year students in 2006 was 34%. Much of the poor performance in higher education was attributed to the articulation gap between school and higher education (Council of Higher Education, 2013).

The Royal College of Nursing cited various reasons which led students to quit, which included financial stress, problems with child care and poor experiences on the wards. The mismatch between how the nurses had perceived the programme and the reality once admitted also contributed to student attrition. Furthermore, the students reported growing difficulties in coping with the academic demands of nurse training (Waters, 2006). Wright and Maree (2007), researching reasons for dropout at the Tshwane University of Technology, examined pre-enrolment perceptions of first year nursing students and this revealed that pre-entry perceptions of what is involved in nursing education frequently differed from what needs to be learnt to reach professional nurse status. Brodie, Andrews, Andrews, Thomas, Wong and Rixon (2004) had similar findings in studies they conducted in two British universities.

Stickney (2008) groups factors associated with attrition into three categories: personal and demographic variables; environmental variables; and academic variables. Personal factors include perceptions of nursing, motivation, self-concept, life changes and stress, while demographic variables include age, gender, race, parental education and age. Environmental

variables relate to the number of hours worked, adequacy of child care and available support services. Academic variables include students' levels of previous education, preadmission test scores, grade point averages and methods of high school completion.

Urwin et al. (2010) groups factors contributing to student attrition into the following three levels: (i) micro-level (individual student factors); (ii) meso-level (institutional factors); and (iii) macro-level (political and professional factors). Micro level factors include students' individual academic capability, suitability for nursing, personal and family circumstances, lack of financial support, wrong career choice, health and childcare (Urwin et al., 2010; Glossop, 2002). Meso level factors include orientation programmes, rules and regulations, membership in campus organizations, involvement in decision making, housing policies, counseling offices, ease of registration and staff attitudes (Tinto, 2006; Bean, 2005). Macro level issues are affected by broader political and professional considerations, such as insufficient salary as students become salaried employees of the National Health Service, the introduction of supernumerary status, the bursary system and student loans. This funding model is claimed to contribute to student poverty (Chatterjee, 2004 cited in Urwin et al., 2010). An important aspect that resulted from the removal of schools of nursing has been the loss of nurses' homes, which provided accommodation for many students (Urwin et al., 2010).

Much of the data relating to academic dropout has been drawn from exit interviews and surveys. Urwin et al. (2010) conclude that there is clearly no single reason that explains which type of student is likely to leave. These authors are of the view that attrition can be a means of filtering out unsuitable candidates and that some degree of attrition is inevitable and necessary in order to maintain standards within the profession. Glossop (2001) highlights conceptual issues, such as influences of policy, programme structure, duration of training,

recruitment processes and socioeconomic factors, all of which can influence discontinuation of training. A preliminary enquiry within the KwaZulu-Natal College of Nursing (KZNCN) revealed that the main reasons for attrition were academic failure, poor academic progress, failure to obtain DP's, personal reasons, wrong choices, absenteeism, abscondment, pregnancy, ill health and death (KZN college of Nursing, 2009). Tinto and Pusser's (2006) model posits that students enter an educational institution with a wide variety of factors ranging from family and community background; social status, such as parental education and financial resources; individual attributes; skills; and motivation, all of which influence decisions to stay or leave. Hall (2004), who conducted a study on the work environment of nurses employed at South African health facilities in the public health sector, found that the work environment is stressful and unsupportive, which results in many nurses believing that they are no longer able to provide proper health care. This is mainly due to factors over which they have no control, such as staff shortages, an increase in the number of patients and the prevalence of HIV/AIDS. In a study conducted by Breier et al. (2009a), student nurses cited fear and distress due to the possibility of contracting TB or HIV/AIDS in the work environment. This challenges nursing institutions to put mechanisms in place to prevent loss of students as a result of environmental factors.

According to statistics from the South African Nursing Council, the number of professional nurses in South Africa has grown by about 28.3% over the nine year period of 2003-2012, whereas the number of enrolled nurses has grown by about 74.9% in the same period. The steady growth in the professional nurse category has been escalated by the two year bridging programme enabling enrolled nurses to "upgrade" to registered nurses. However, it is important to note that the apparently more significant growth in the enrolled nurse category is backed by students who have dropped out of the four year programme (South African Nursing Council, 2013). The National Minister of Health has called for the re-opening of

nursing colleges to increase the production of nurses to address the shortage of nurses in this country (Department of Health, 2011; Nursing Education Association, 2011).

The supply of health professionals was identified as a challenge in the strategy report for Human Resources for Health South Africa (Department of Health, 2011). According to this report, nursing numbers declined by 10 000 in 2006 and this was attributed to the closure of nursing colleges. Although this report also reflected a steady growth of professional nurses in the public sector from 40 786 in 2002 to 55 309 in 2010, there is a marked shortage of professional nurses. A preliminary gap analysis of critical health professionals demonstrated that in the year 2011, there was a shortage of 20 352 professional nurses in the public sector. With the steady increase in production versus demand, the gap has been estimated as follows; 22 121 in 2015; 11 527 in 2020; and 898 in 2025. These figures again suggest students that are recruited to train as nurses should (Department of Health, 2011) not be lost through attrition.

The South African Nursing Strategy of 2008 highlights the importance of having an adequate number of nurses to fill all open positions in the health care industry (Department of Health, 2008). According to figures in the Medical Chronicle, August 2009, there were approximately 42 000 vacancies for nurses in the public sector in South Africa (Slabbert, 2009). The strategic planning session held from the 18th to 20th of May 2012 reported the vacancy rate of professional nurses in KZN as 23% (KZN-Department of Health, 2012). The vacancy rate of professional nurses in the country and in the province suggests that more nurses need to be trained and retained. Furthermore, the number of graduating nurses is critical to improving staffing in clinical practice areas, as attrition of students impacts on human resource staffing issues and the quality of care provided by nurses (Brodie et al., 2004). With the introduction of National Health Insurance and the re-engineering of Primary

Health Care, the training and retaining of professional nurses needs to be given urgent attention to improve skills and healthcare access (Department of Health, 2012).

In response to the shortage of nurses in KZN, the four year comprehensive nursing diploma programme has increased its capacity and now caters for double the number of student nurses than in 2001 (KZN Department of Health, 2004). As a retention strategy, a contractual agreement was introduced for students to serve back an equal number of years as that of training (KZN Department of Health, 2004). As a human resource strategy, in 2010, the Department of Health (DOH) for KwaZulu-Natal strategized to train 800 community health workers to become Enrolled Nurses within a two year period (2010-2012) through the KwaZulu-Natal College of Nursing (KZN College of Nursing, 2010b). These students will then be eligible to do a two year bridging programme leading to registration as a professional nurse.

The report on the Strategic Plan for Nursing Education, Training and Practice recognizes that the South African health care system is mainly nurse based and calls for the competencies and expertise of nurses to manage the huge burden of disease consisting of HIV/AIDS, Tuberculosis, high maternal and child mortality, non-communicable diseases, violence and injuries (Department of Health, 2012). Although the number of nurses per 100 000 population seems favorable, the mix in the various categories is skewed, with a significant shortage of professional nurses. This shortage will significantly impact on the re-engineering of Primary Health Care to strengthen the District Health System, which has increased the demand for specialist nurses, such as school health nurses, advanced midwives and nurses qualified in Primary Health Care (Department of Health, 2012). In South Africa, nurses can specialize after they have completed the 4 year comprehensive nurse training programme or the bridging to professional nurse programme and are registered as a professional nurse with

the SANC (South African Nursing Council, 2005). It is therefore critical that a sufficient number of professional nurses are successfully trained through the 4 year comprehensive basic nursing education programme in order to progress to become specialist nurses.

Another problem compounding the shortage of nurses is an aging workforce which has been reported worldwide, including South Africa. Shelton (2003) reported a growing shortage of registered nurses in the United States that is related to the ageing workforce and estimated that by the year 2020, 40% of the registered nurses will be older than 50 years. In South Africa, the SANC statistics for 2012 reflect that 31% of registered nurses and midwives are already in the age range of 50-59 years old, 30% in the age range of 40-49 years old, 19% are between 30-39 years old and only 4% are younger than 30 years old (South African Nursing Council, 2013). There is therefore a need to have a strategic plan to prevent the looming crisis in the near future.

As education is subsidized by the government, attrition of student nurses is costing the taxpayers (Urwin et al., 2010; Waters, 2008). In 2006, in the UK, BBC news (2008) reported that out of a total of 25,101 students who started degrees or diplomas in nursing, 56% dropped out before the end, costing taxpayers an estimated £98m. Gill Robertson, student advisor at the Royal College of Nursing, stated “*any attrition is a huge drain on resources*” (BBC news, 2008).

In 2010, the KwaZulu-Natal College of Nursing introduced a bursary system for students as a cost saving measure. This contract has financial implications for the students who drop out as they are required to pay back in monetary terms 40% of the bursary received (KZN Department of Health, 2010). To ensure that the taxpayers’ money is well spent and students are not financially compromised, it makes sense that the students who are selected to train complete their training within the regulation time. For this to succeed, however, would

necessitate marketing for nurse training to send out correct messages about the nature of nursing and selection strategies to take into account the applicants' potential to succeed as nurses.

1.3 STUDY CONTEXT

In keeping with the government's Reconstruction and Development Policy, the Ministry of Health in KZN planned the restructuring of the nursing education system in KZN (Rustomjee, Hoque, Wamukuo and Jinabhai, 1999). Prior to rationalization there were three separate public nursing colleges in the province of KZN, each one affiliated to a different university for setting standards and promoting quality. Each of these colleges had its own curricula, policies, governance structures and examination systems. The process of unifying the three public nursing colleges resulted in the establishment of a single nursing college with a uniform curriculum, examination and management system. The first intake of nurses for the four year basic nursing education programme commenced training on the 1st of July 2005 (KZN College of Nursing, 2008).

The amalgamated college began its operation in 2005 and took over the administration of all 25 public nursing education institutions (NEIs) in the province of KZN as reported at the launch of the college in 2007. (Nkonyeni, 2007). Eleven of these NEI's are referred to as campuses, ten offer the four year comprehensive nurse education and training programme and one offers post-registration courses. The remaining fourteen NEIs are referred to as sub-campuses (schools of nursing) and mainly offer post-registration diploma courses; bridging to professional nurse course; and one and two year supplementary basic nursing education programmes. There is a huge rural-urban difference between the NEI's with regard to geographical location, terrain, distance between each other, infrastructure capacity and availability of adequately resourced staffing and facilities for education and training of

nurses. Two of these campuses have been selected to carry out the case study and will be described in more detail later in this chapter

1.4 PROBLEM STATEMENT

Unlike some of the other traditional professions, nursing continues to be a well sought after profession by young people and the number of applicants far exceeds the required total number per intake (Breier, Wildschut and Mgqolozana, 2009b; Mkhize and Nzimande, 2007; Waters, 2006). The challenge, however, is that a vast number of students drop out before completing the programme (Council of Higher Education, 2013; BBC news, 2008; Bunting, 2004). Taking into consideration the shortage of nurses in KZN, the province cannot afford to recruit student nurses in large numbers and not see them through to completion. The throughput rate in the selected College of Nursing from 1 July 2005-31 December 2012 was 54.6%, with an attrition rate of 20,76% (KZN College of Nursing, 2013b). Nursing education institutions worldwide are concerned by attrition, not only in terms of wastage of resources, financial costs and the meeting of targets, but also because of the effects on staff morale and the psychosocial and financial impact on those who dropout (O'Donnell, 2011; Deary, Hogston and Watson, 2003; Wells, 2003; Glossop, 2002).

The question of interest not only to students, but also to employers, institutions of learning, parents of students and spouses is, "*Why do students drop-out before completing their studies?*" (Tinto, 2000). Research conducted by Glossop (2001) and Turner et al. (2006) support the need for more research on student nurse attrition as it is a world-wide problem resulting in a shortage of qualified nurses and wastage of human and physical resources. Mugarura and Mtshali (2007), in their study on student support of undergraduate nursing programmes, recommended that further research in this area could explore student attrition in nursing programmes in South Africa, as most of the studies are international studies, focusing

on university students. Although the phenomenon of student attrition in the college of interest in this study has been raised by the college senate a number of times, it has never been explored empirically (KZN college of Nursing, 2009). O'Donnell (2011) asserts that attrition in nursing is a complex and highly contextual issue resulting from multiple variables specific to that context. This author therefore recommends a context driven approach to investigating this phenomenon, hence the need for this study at the selected college of nursing.

1.5 PURPOSE OF THE STUDY

The purpose of this study was to explore the attrition of student nurses in a four year comprehensive basic nursing education programme at a selected nursing college in KwaZulu-Natal to inform student support initiatives to increase throughput rates.

1.6 RESEARCH OBJECTIVES

The objectives of this study were:

- i. To explore trends in student dropout in the college of nursing basic nursing education programme in terms of (a) gender and age; (b) level of study; (c) discipline/course in general nursing, midwifery, psychiatric nursing science, community nursing science, anatomy and physiology, and social sciences.
- ii. To explore the relationship between student dropout and demographic data in the campus of offering.
- iii. To explore the relationship between the study progress of students and their demographic data in the campus of offering.
- iv. To explore factors which contribute to dropout rates.
- v. To explore the students' levels of satisfaction with the programme.

- vi. To describe what measures are in place to address dropout rates during (a) pre-enrolment, (b) integration and (c) engagement.

1.7 RESEARCH QUESTIONS

- i. What are the trends in student dropout in the college of nursing basic nursing education programme?
- ii. What is the relationship between student dropout and students' demographics in the campus of offering?
- iii. What is the relationship between a student's study progress and the campus of offering?
- iv. What factors contribute to dropout rates?
- v. What is the level of satisfaction of students with the programme?
- vi. How does the college of nursing address student dropout?

1.8 SIGNIFICANCE OF STUDY

Policy: Stickney (2008) and Hopkins (2008) argue that most of the existing studies tend to focus on opening access and student throughput and that less attention has been paid to process related studies that focus on exploring and addressing problems of attrition to facilitate progression and timely completion of the programme. O'Donnell (2011) suggests that the best suited solutions result from understanding the magnitude of the problem in a selected context. The outcomes of this study may provide policy makers in nursing education with scientific evidence on the magnitude of attrition at the selected college of nursing.

Programme management: The findings may assist the college to come up with solutions that will address the problem of attrition from as early as the pre-enrolment, integration and institutional engagement phases, as stated by Tinto and Pusser (2006), as early prevention of

attrition would result in positive education outcomes, which is the direct intention of the study.

Curriculum review: Establishing the dropout trends in courses and levels of study could lead to a process of reviewing the curriculum and balancing the curriculum content accordingly.

Student support programme: The gaps identified through this study and knowledge gained may assist in establishing well-structured, holistic student support and academic monitoring programmes, aspects which need to be strengthened in the college of choice in this study. By reducing the number of students dropping out of the programme, more will qualify and enter the nursing profession, thus contributing to the much needed supply of nurses for nursing practice. Letseka and Maile (2008) stated that the high university dropout rate in South Africa reported by the Department of Education in 2005 cost the National Treasury R4.5 billion in grants and subsidies without a return on investment. As public nurse education and training is funded by the government in this province, every effort must be made to retain student nurses that are recruited into the system. Thus, exploring reasons why students fail to progress may contribute to minimize financial and material wastage which result from student dropout.

Community and society: The community and society may benefit as more student nurses complete their training, thus improving the available pool of qualified nurses to serve the needs of the South African population and KZN specifically.

Research: This is the first study of this nature to be conducted at the selected College of Nursing. The findings may therefore serve as baseline data for further research in this area.

1.9 OPERATIONAL DEFINITION OF TERMS

The key concepts used in this study are defined as follows:

Attrition

Johnson (2012) defines attrition as departure of a student from all forms of higher education, prior to completion of a degree or other credentials.

In the context of this study, attrition or dropout refers to students who are excluded prior to completion of the programme. It also refers to modular attrition, which is when a student drops a module or subject and joins a lower class (group) of students. The terms attrition and dropout are used interchangeably in this study.

College of Nursing

A college of nursing is a post-secondary educational institution which offers professional nursing education at a basic and post-basic level, where such nursing education has been approved in terms of section 15(2) of the Nursing Act 50 of 1978, as amended (South African Nursing Council, 1978).

Demotion

In this study, demotion refers to dropping a semester or module by six months (KZN College of Nursing, 2013a).

Four year comprehensive basic nursing programme

The four year comprehensive basic nursing programme is the programme of education and training that has been approved in terms of Section 15 (3) of the Nursing Act 1978, leading to the obtaining of a qualification which confers on the holder thereof the right to registration as a nurse (general, psychiatric and community) and midwife (South African Nursing Council, 1985).

Learner

A learner means a person registered with the South African Nursing Council in terms of Section 32 of the Nursing Act No. 33 of 2005 (South African Nursing Council, 2005). In the

context of this study the concept learner is referred to as a student, and the terms student and learner are used interchangeably.

Throughput

Throughput is defined as the amount of material or items passing through a system or process (Oxford University Press, 2010). Latief (2005) defined throughput as the number of undergraduates who complete their studies in the prescribed time. In this study, throughput refers to the number of students who obtain their qualification in the prescribed time of four years (KZN College of Nursing, 2013a).

Trend

The concept trend implies the general direction in which something is developing or changing e.g. fashion (Oxford University Press, 2010). In this study, the term is used to mean a pattern that repeats itself or remains steady, as in the case of trends in attrition of student nurses.

Student satisfaction

Tessema, Ready and Yu (2012) describes student satisfaction as the extent to which students in an academic setting are satisfied with a number of college-related issues such as advising, quality of instruction, course availability, and class size. In this study, the concept, student satisfaction, is used to describe whether students are contented and having their needs fulfilled with respect to the quality of services provided by the selected nursing education institution during the four year nursing programme.

Termination

In the context of this study, the term, termination, refers to a student who is excluded from the nursing programme, either as a result of examination failure or any other reason (KZN College of Nursing, 2013a).

1.10 SUMMARY OF CHAPTER

This chapter introduced the topic, attrition, and provided a background to the study. It outlined the context of the study, the problem statement, purpose of the study, research objectives, research questions, significance of the study and operational definitions used in this study. The next chapter encapsulates the phenomenon, attrition, and describes the conceptual framework used in this study.

1.11 THESIS OUTLINE

Chapter 1

This chapter introduced the reader to the study. It provided the background to the study, the study context, problem statement and purpose of the study, the research objectives and research questions, the significance of the study and the operational definitions.

Chapter 2

This chapter presents the conceptual literature review. It includes descriptions of concepts, such as attrition or dropout, retention and throughput. It also includes an overview of existing frameworks of attrition and concludes by an exposition of the conceptual framework used in this study.

Chapter 3

This chapter presents an empirical literature review to gain an understanding of factors related to dropout or attrition. It describes perceived factors contributing to dropout, trends in

student dropout, factors that promote retention of students and measures in place to promote retention. It also presents the integration of findings to Tinto and Pusser's conceptual framework.

Chapter 4

This chapter describes the research methodology that was followed in this study. A pragmatic stance using a mixed methods approach and a case study design was adopted. The research setting was a College of Nursing in KwaZulu-Natal. Two campuses within the college of nursing were selected as the embedded units of analysis. Quantitative and qualitative methods were used for sampling, data collection and data analysis. A self-administered questionnaire was used for the quantitative aspects; individual and focus group interviews for the qualitative aspects. Students and academic staff participated in the data collection process. Quantitative data was analyzed using IBM SPSS version 21 software package and qualitative data analyzed using Miles and Huberman (1994) cyclical interactive model of data analysis.

Chapter 5

This chapter presents the data analysis, using a concurrent mixed methods approach, as well as the results and discussion of findings. The findings from the two selected campuses were integrated to present a holistic view of the topic under study.

Chapter 6

This chapter presents the final discussions, recommendations and conclusions of the study.

CHAPTER TWO

CONCEPTUAL LITERATURE REVIEW

2.1 INTRODUCTION

Burns and Grove (2010) state that there are two types of literature that can be reviewed, namely theoretical and empirical. The theoretical aspect deals with concept analysis, theories and conceptual frameworks that support a selected research problem and purpose, while the empirical component comprises of knowledge derived from research studies (Burns and Grove, 2010) A review of both forms of literature was conducted for this study in order to comprehend the phenomenon of attrition holistically. According to Tinto and Pusser's (2006) conceptual model, which guides this study, understanding various factors that interplay and affect a student's ability to complete a programme is vital in grasping the phenomenon of attrition. It is therefore imperative that the key concepts underpinning the framework chosen for this study are thoroughly presented. Thus, this chapter is dedicated to a discussion on concepts central to the investigation, namely attrition, or dropout, retention and throughput. It also includes an in-depth discussion of Tinto's conceptual model as well as a review of other existing frameworks on student attrition and retention.

2.2 ATTRITION OR DROPOUT

As established in the previous chapter, student attrition, or dropout, in nursing is a global problem which negatively impacts the health industries, which are already experiencing shortages in professional nursing supply to meet the health demands of the growing populations (Department of Health, 2012; Stickney, 2008; Wells, 2003). Countless studies have been conducted to better understand the phenomenon and have provided their perspectives on what the term attrition means according to the context in which the studies

were conducted. All the researchers, however, have used the terms attrition and dropout interchangeably and no studies were found that differentiated between the terms, thus making it evident that the terms are one and the same.

Deary et al. (2003), in their study on attrition in nursing, defined attrition as the loss of individuals from the nursing programme. Schneider (2010) describes attrition as students leaving a programme before graduation. Johnson (2012) defines attrition as departure of a student from all forms of higher education prior to completion of a degree or other credentials. Gabb, Milne and Cao (2006) stated that attrition referred to the loss of students from “something”, and that “something” could stand for a unit, a module, a subject, a year of a multi-year course or a whole course. Martinez (2003) states that attrition occurs when a student “drops” from the class or the student leaves a course of study entirely. Angelino, Keels and Natvig (2007) refer to attrition as a decrease in the number of students participating in course activities or a degree programme. Jeffreys (2012) states that attrition means dropping out of a programme.

Such distinct definitions by different researchers thus supports the concept presented by Ascend Learning LLC (2012) and Tinto (1975) that studying student attrition may be challenging since there is no common definition of attrition. In the context of this study, attrition or dropout refers to students who are excluded prior to completion of the programme. It also refers to modular attrition, where the student drops a module or subject and joins a lower class (group) of students. The terms, attrition and dropout, are used interchangeably in this study.

Although there are slight differences in the definitions, various common themes emerged throughout the literature regarding attrition. For instance, the literature reveals that attrition usually occurs within the first year of study since that is the period when students get

integrated into both the academic and social systems of the institution (Grebennikov and Skaines, 2008; Gabb et al., 2006; McMillan, 2005; Nora, Barlow and Crisp, 2005; Last and Fulbrook, 2003; Tinto, 1993; Tinto, 1975). Another theme noted was that attrition can be regarded as either *institutional*, *programme* or *module* attrition (Tambone, 2012; Stallone, 2011; Urwin et al., 2010; Tinto, 1975). With regards to *institutional* attrition, El Ansari (2002a) states that the degree of student satisfaction with their educational experiences is an important dimension in the assessment of institutional effectiveness. Similarly, according to Tinto (1975), given the levels of educational goal commitment, it is the individual's institutional commitment that most directly relates to variation in dropout behaviour. This implied that there might be a relationship between whether individuals transferred from, dropped out of or persisted in an institution and their educational goal and institutional commitment (Tinto, 1975). To further clarify the relationship and the influence an institution may have on an individual's behaviour on whether to persist or drop out, Tinto (1975) classified the institutional factors based on its *characteristics*, *type*, *quality* and *size* as follows:

- *Institutional characteristics*, such as its resources, facilities, structural arrangements and composition of its members may place limits upon the development and integration of individuals within the institution that lead to the development of academic and social climates or "presses", with which the individual must come to terms.
- *Institutional type*, with respect to public or private institutions, showed that public institutions of higher education tend to have higher dropout rates than private institutions, which was attributed to the student selection process which took place before entering private colleges, whereas the selection process within the public institutions normally took place after entrance.

- *College quality* implied that the type of college correlated roughly with quality of the college, hence the quality of the college has also been found to influence persistence in college.
- *Size of the institution*, with respect to enrolment, also appears to be related to persistence.

Alternatively, in terms of *programme* attrition, Deary et al. (2003) state that the reasons why students leave programmes are many and varied. For instance, nursing students may discontinue a programme based on academic failure, misconduct or failing clinical assessments (Deary et al., 2003). According to Tomkinson, Warner and Renfrew (2002), students may also leave a programme because the subject matter may not be what they had expected or the content of the course may be inappropriate for their background or experience. It could also be that the programme may be right, but that the student may have problems commuting to campus (Tomkinson et al., 2002). Additionally, Mason (2012), in her study, found that satisfaction with the programme played a big role as to whether students completed or discontinued the programme. Likewise, *module* attrition is related to students' satisfaction with the type of module they are undertaking (El Ansari, 2002a).

2.3 RETENTION

Gabb et al. (2006) state that attrition, retention, completion and progress are commonly used as indicators of the quality of education being provided at an institution. According to Hagedorn (2005), retention and dropout are among the most widely used dichotomous measures in educational research and practice. The two terms have typically been defined as two sides of the same coin, with retention meaning staying in school until completion of a degree and dropping out meaning leaving school prematurely (Hagedorn, 2005). Researchers Crosling, Thomas and Heagney (2008) have defined retention as the process of retaining

students who enrol for a qualification so that they remain at the particular institution until they have completed their studies for that qualification. Similarly, Berger and Lyon (2005) have referred to retention as the ability of an institution to retain a student from admission to the university through to graduation. For the purpose of this study, retention refers to students who are currently enrolled in the nursing programme at the selected College of Nursing.

Because retention is a multifaceted and complex issue affecting a broad spectrum of areas within the institution, exploring student retention would mean focusing on the whole student experience from the time the student is recruited into the institution up until employment (University of Fort Hare, 2009). Wild and Ebbers (2002) discuss that in order to understand student retention, it is important to identify the retention goal of the institution, as well as the criteria, definitions and data needed to monitor progress toward the retention goal. Authors Yu, DiGangi, Jannasch-Pennell and Kaprolet (2010) also state that student retention is an important issue for all university policy makers due to the potential negative impact on the image of the university and the career path of the dropouts.

2.4 THROUGHPUT

Fisher (2011) states that throughput is a more highly complex and contested issue than most people believe it to be. Latief (2005) has defined throughput as the number of undergraduates who complete their studies in the prescribed time. Nair (2002), on the other hand, describes throughput as the number of years used by students to complete a degree or diploma. For the purpose of this study, throughput refers to the number of students who complete the nursing programme within the prescribed time of four years. Nair (2002) maintains that there is a relationship between low throughputs and under preparedness due to inadequate schooling systems. According to Frouws (2007), for universities to maintain high standards, they not

only have to be concerned about the standard of their academic programmes, but also the success rate and throughput of their students.

2.5 EXISTING FRAMEWORKS

A number of theories and models exist that may help researchers to generate new ways of understanding attrition. No single theory can explain all aspects of attrition since many other factors influence student dropout or attrition, such as environmental influences, transition, integration, involvement and individual characteristics, just to name a few. It is for this reason that most researchers have used a combination of models to explain student attrition (Tinto and Pusser, 2006; Tinto, 2006; Astin, 1999; Tinto, 1987; Bean and Metzner, 1985)

Astin (1985) developed the *Theory of Involvement* which implies that the more involved a student is with the institution, the higher the likelihood of student retention (Habley and McClanahan, 2004). Astin (1985) found that there are three important forms of student involvement which enable students to integrate into the institutional system thus fostering retention, namely academic involvement, involvement with the faculty, and involvement with student peer groups (Habley and McClanahan, 2004). Bean (1983; 1980), on the other hand, developed a *Model of Student Departure*, which is a psychological processes model that explains the factors contributing to student attrition (Habley and McClanahan, 2004). According to Bean (1980), this model was an adaptation of an organizational turnover model, which was developed to explain employee turnover in work, and examines how organizational attributes and reward structures affect student satisfaction and persistence (Habley and McClanahan, 2004). Another model on student retention by Bean and Eaton (2001) had its foundation rooted in the psychological processes at the base of academic and social integration. In this model, Bean and Eaton (2001) presented four psychological theories to understand retention, namely attitude-behavior theory, which provided the overall

structure of their model; coping behavioral theory, which meant an individual had the ability to assess and adapt to a new environment; self-efficacy theory, which viewed an individual's self-perception as capable of dealing with specific tasks or situations; and attribution theory, which implied that an individual has a strong sense of internal locus of control.

Bean and Metzner (1985) also developed the *Non-traditional Student Attrition Theory*, which suggests that environmental factors have a greater impact than academic variables on departure decisions of adult students. Similarly, Pascarella (1985) developed a general causal model that could be used to understand the pattern of influences involved in the impact of postsecondary education on learning and cognitive development. The model implied that a student's background/pre-college traits and the structural/organizational characteristics of institutions directly impact the college environment. Likewise the quality of student effort, student background/precollege traits, and interactions with agents of socialization directly influence learning and cognitive development (Pascarella, 1985).

According to Habley and McClanahan (2004), Spady (1970) was the first to propose a widely recognized model for college student dropout. He proposed a sociological model of the dropout process drawing from Durkheim's suicide model. Taking into consideration an individual's family background, Spady proposed five variables, namely academic potential, normative congruence, grade performance, intellectual development and friendship support that he believed contributed directly to social integration (Habley and McClanahan, 2004). These five variables were then linked indirectly to the dependent variable, dropout decision, through two intervening variables, satisfaction and institutional commitment (Habley and McClanahan, 2004).

Vincent Tinto, the most widely known and accredited author dealing with attrition, led the research on student attrition with his revolutionary 1975 study on *Dropout from Higher*

Education: A Theoretical Synthesis of Recent Research, in which he developed the *Student Integration Model (SIM)* (Tinto, 1975). The underlying theory for this model was adapted from the work of William Spady and that of the French philosopher, Emile Durkheim, who found that some people committed suicide because they lacked the values of the social system in which they participated (Draper, 2008). According to Tinto (1975) the Student Integration Model (SIM) was rooted in the view that student attrition is a longitudinal process that starts when students present with individual attributes, family backgrounds, academic characteristics and skills; and continues through a series of interactions between the individual and the institution during which time the student is integrated both academically and socially until completion of learning. Tinto's Student Integration Model continues to be an influential model of student attrition, which has proved valuable in studies of student dropout in the field of nursing (Urwin et al., 2010; Wells, 2003). The majority of the researchers that will be discussed in this study have used Tinto's model of student attrition as a point of reference in understanding the process of attrition.

No theory, however, is without its critics. McCubbin (2003) criticized the SIM model stating it was grossly flawed and failed to explain the majority of attrition behavior and that it was only applicable to "traditional" students. In addition, McCubbin (2003) also argued that most researchers felt academic integration was not an important predictor of student attrition in traditional student populations as implied by Tinto's SIM model. As a result of such criticism, Tinto revised his model in 1982 and 1993, respectively, to fit later theories in a collective effort to create a single unifying attrition model and to address the shortfalls noted in his past model. For example, he incorporated Astin's *Involvement theory* in which more emphasis is placed on motivation and behaviour (Astin and Oseguera, 2005; Astin, 1999). He also incorporated the work of John Bean, who had expanded on previous work of Tinto and Astin by integrating academic variables, student's intent, goals, expectations and

environmental factors into a revised model of persistence which has another five facets, namely *routinization*, the idea that student's life becomes routine; *instrumental communication*, referring to how well an institution distributes information about students life; *participation* in classroom activities; *integration*; and *distributive justice* (Bean, 2005; Bean, 1990).

2.6 CONCEPTUAL FRAMEWORK: ADAPTATION OF TINTO AND PUSSER'S 2006 MODEL OF INSTITUTIONAL ACTION

The basic premise of Tinto (1975) model of student attrition is that departure or student attrition is a longitudinal process that starts when students present with individual attributes, family backgrounds, academic characteristics and skills. The process continues as a series of interactions between the individual and the institution during which time the student is integrated both academically and socially until completion of learning. According to Tinto (1975) and Tinto and Pusser (2006), students enter an institution with a variety of background attributes such as gender, social class, race and ethnicity. They possess abilities, skills and levels of prior academic and social preparation. They have certain attitudes, values, goals, commitments and expectations about higher education. At the same time, they participate in a range of external settings, such as family, work and community, each of which has its own demands on the students' time and energies, which influence decisions to stay or dropout.

Tinto's most recent model in partnership with Pusser was presented in 2006 and is known as the Model of Institutional Action (Tinto and Pusser, 2006).

Figure 1 below illustrates the original structure known as the *Preliminary Model of Institutional Action*.

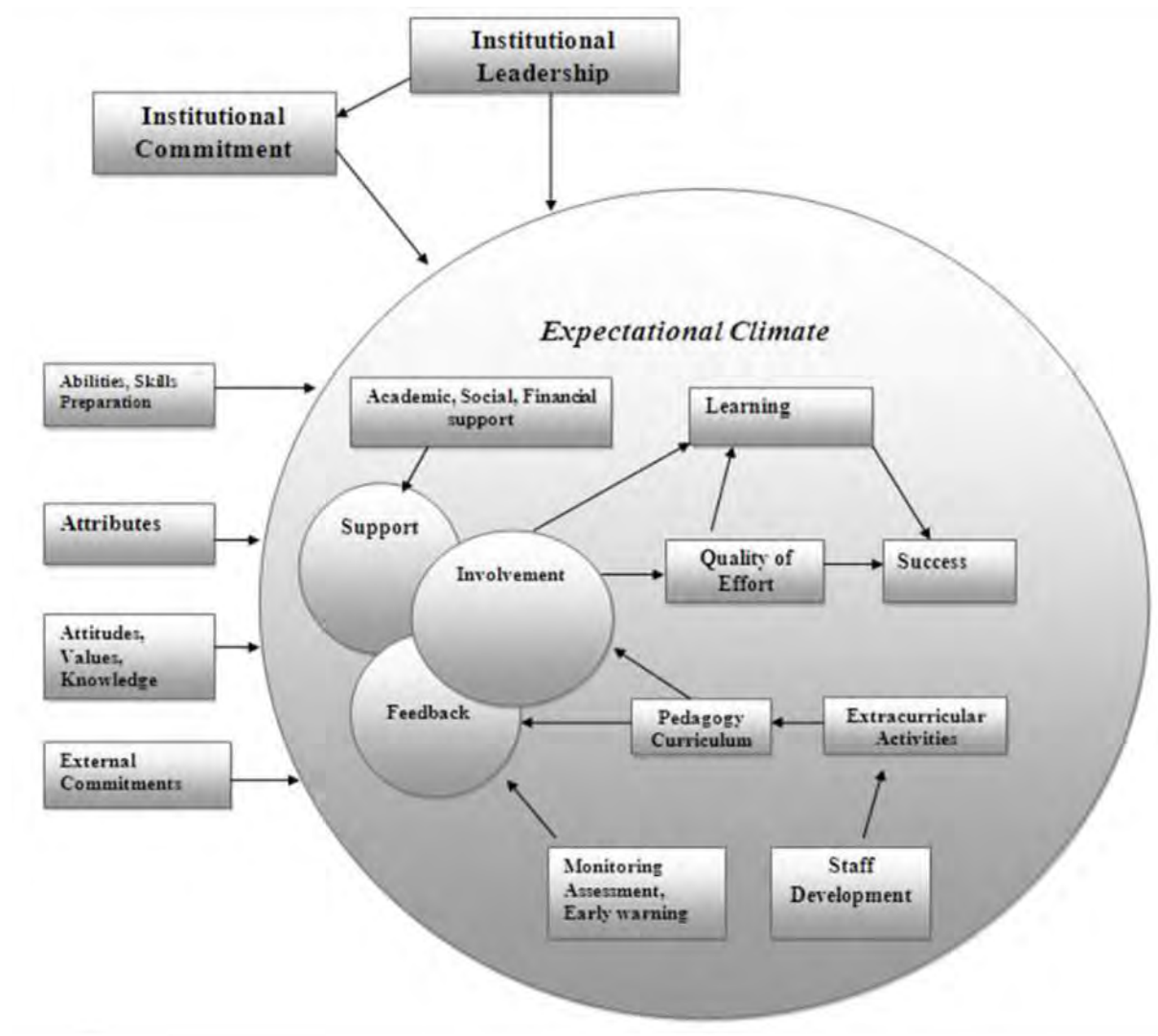


Figure 1: Structure of a preliminary model of institutional action (Tinto and Pusser, 2006)

While Tinto and Pusser (2006) acknowledge that individual attributes and characteristics do matter in attrition, they maintain that these conditions are outside the control of institutions. However, if institutions are serious in their mission for student success, they have the capacity to change the conditions or environments in which students are placed. Therefore,

the model focuses on conditions within the institutions rather than on the attributes of students themselves. Tinto and Pusser (2006); Tinto (2002) assert that there are five conditions within institutions that prevent attrition and these are institutional commitment, institutional expectations, support, feedback and involvement or engagement. The original model was adapted, as shown in Figure 2 below, to provide a framework to guide this particular study. The main concepts in this framework are (a) the pre-enrolment and integration phase, with recruitment process, enrolment process, induction process, student demographics (students entry characteristics) as sub-concepts; (b) institutional engagement, with curriculum design, student involvement and monitoring, assessment and early warning, as well as feedback, support, financial aid, advising, academic support, psychosocial support as sub-concepts, and (c) student outcomes, with success or dropout as sub-concepts.

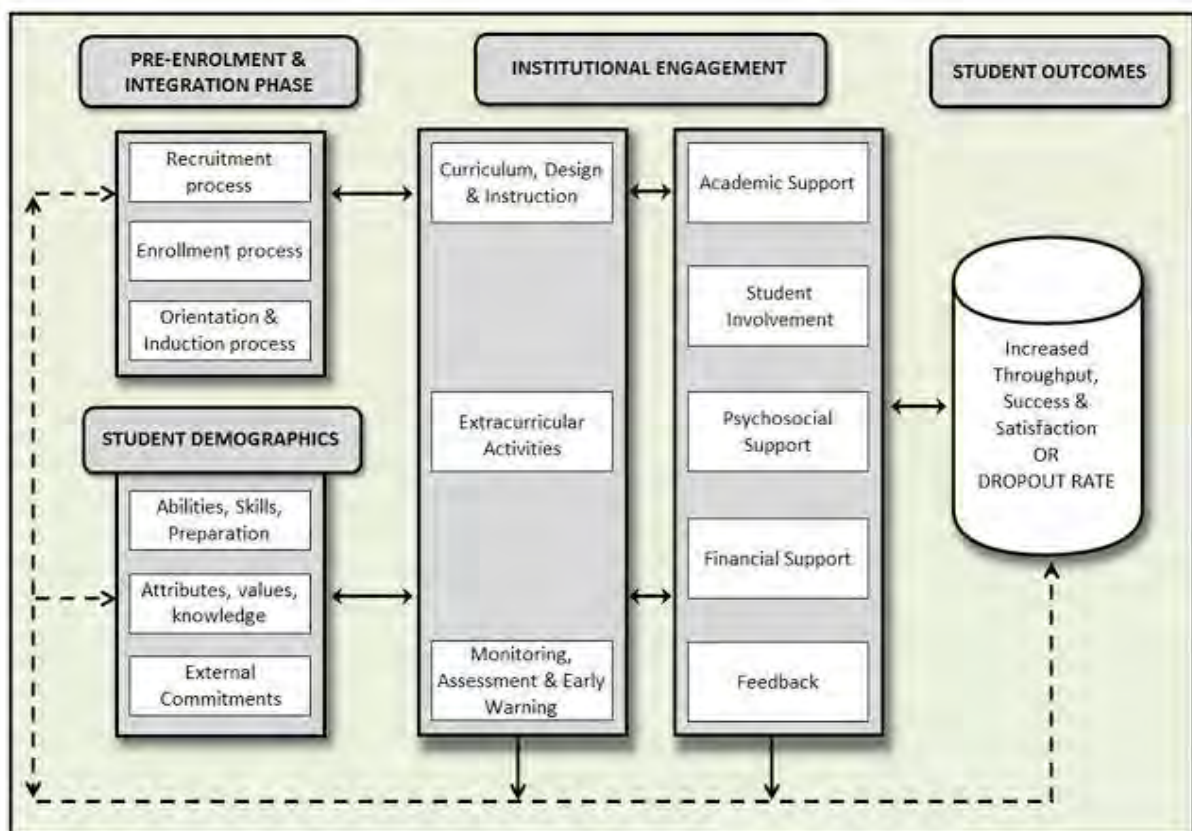


Figure 2: Tinto and Pusser 2006 Model of Institutional Action, as modified for this study

The pre-enrolment and integration phase includes activities, such as attracting the right students, providing financial aid, easing the transition to college through orientation programmes, bridging programmes that provide support, programmes for parents so that they understand students life, advice and psychological or social counseling, academic skills development, basic skills, study skills, time management, provision of study areas, programmes celebrating cultural diversity, sensitivity to ethnic and racial issues, and participation in campus organizations and activities, which should be all done in an effort to increase retention and reduce attrition (Tinto and Pusser, 2006; Tinto, 2002; Hossler, 1990; Bean and Metzner, 1985).

Institutional engagement, on the other hand, suggests that the student's goal is critical to the student's rate of success (Tinto and Pusser, 2006). It is a reflection of institutional leadership and the willingness of leadership to invest resources for staff development programmes that will provide social and academic support, social and psychological support, financial support, academic counseling and involvement of students in those aspects of institutional functioning that directly impacts on students' success. Institutional commitment, therefore, implies that students are more likely to persist in settings that hold high and clear expectations for their achievement (Tinto and Pusser, 2006; Tinto, 2002).

No one rises to low expectations and too often institutions expect too little of their students or develop activities that require too little effort from them. Students need to be clear about what is expected of them and what is required for successful completion of courses. (Tinto, 2002) maintains that students need to understand the road map to completion as follows:

Social and academic support: Tinto's (1975) theory of student dropout claims that social and academic integration are critical for student success and that *social and academic support* promote learning. Many students enter academic institutions inadequately prepared for the

rigors of student's life (Tinto, 2002; 1975). Availability of academic support programmes such as basic skill courses, tutoring, study groups and supplemental education programmes for continuation foster throughput and success (Tinto and Pusser, 2006; Bean, 2005; Tinto, 2002).

Social and psychological support in the form of counseling, mentoring and student support centres provide much needed relief for students, especially those from historically disadvantaged and diverse backgrounds (Tinto and Pusser, 2006; Tinto, 2002). Such centres provide a haven for individuals and for groups who find themselves out of place in a setting where they are a distinct minority. For new students, knowing ports of entry enable them to navigate safely in unfamiliar grounds (Tinto, 2006; 2002). This is also true for new nursing students.

Financial support needs to be taken into consideration, especially for low income students and non-traditional students who have family commitments, have to travel to places of learning and need accommodation as they reside off campus. Work-study programmes assist learners to pay for fees as well as involve learners with other members of the institution (Tinto and Pusser, 2006; Bean, 2005).

Feedback and monitoring, according to Tinto and Pusser (2006) the students are more likely to succeed in settings that provide frequent feedback and monitoring about their performance. For example, putting in place *early warning systems* to students that need assistance so that assistance can be provided early enough, as the longer one waits the more difficult it is to make a difference. *Feedback* also takes the form of classroom assessment techniques, use of learning portfolios and face to face interactions. This enables the faculty to adjust teaching in ways that promote learning. According to Tinto (2002), monitoring, assessment and early

warning are commitments of the educational institution where learning occurs. This is essential to foster student success and for the credibility of the institution.

Involvement or engagement: Educational theorists such as Astin (1999) and Kuh, Kinzie, Buckley, Bridges and Hayek (2006), have long pointed to the importance of social and academic integration, which is more commonly known as involvement or engagement (Tinto and Pusser, 2006). The more students are involved, the more likely they are to persist and the more frequently they engage with the faculty, staff and their peers, the more they will persist, especially in their first year of college (Tinto and Pusser, 2006; Tinto, 2002). Students, who are actively involved in learning with others, learn more and show more intellectual development. It is for this reason that so much of the literature speaks about building learning or educational communities that involve students in learning, especially in the first year when they are so malleable and it is even more relevant in the very place where learning takes place, for instance in classrooms, laboratories, and with students of the campus (Tinto and Pusser, 2006; Tinto, 2002; Astin, 1999). This model also sees engaging students in curricular and extracurricular activities as dominant because it improves the quality of effort invested by students in learning. According to Astin's theory of student involvement, the more involved students are, the more they are likely to stay until they complete. (Astin, 1999). Involvement in extracurricular activities, such as clubs and societies and financial support programmes, is a means of creating self-confidence and a sense of belonging among students (Astin, 1999).

Curriculum design and instruction: Kuh (2009) suggests that educational institutions would do well to arrange curricula in accordance with good educational practices which would encourage students to put more effort in their learning such as write more papers, read more books, meet more often with peers and use information technology appropriately. Involving

students in this way result in gains such as critical thinking, problem solving, effective communication and responsible citizenship (Kuh, 2009). According to Tinto and Pusser (2006) pedagogics of engagement require students to be actively involved in learning with other students in the classroom using cooperative and collaborative learning styles. This type of learning involves learning in groups so that the work of the group cannot be accomplished without each member doing his or her part. Essack (2009) recommends learner centered curricula, which focus on academic and cognitive skills, language proficiency and the capacity for self-directed learning. This requires the use of teaching, learning and assessment methodologies, such as teamwork and collaborative learning, as in problem-based learning and case-based learning. Learning can be enhanced through engagement and interaction between learners and teaching persons. Academic staff require training and development in learner-centered curriculum design (Essack, 2009). These authors suggest that curriculum design and instruction must be reconstructed to yield high student outcomes.

Lastly, student outcomes are a culmination of both student and institutional effort from the pre-enrolment of the student, through to institutional integration and student involvement or engagement being taken seriously, resulting in student persistence and success (Tinto and Pusser, 2006).

All these concepts, as discussed according to Tinto and Pusser (2006) Model of Institutional Action, have been presented in the adapted format in Figure 2 above.

2.7 CONCLUSION

This chapter presented a discussion of the concepts involved in student attrition, particularly the terms attrition, or dropout, retention and throughput. A brief review of various existing frameworks relating to attrition was also provided. The chapter concluded with a

comprehensive discussion on Tinto and Pusser's (2006) conceptual model, which underpins this study.

The next chapter presents an in depth literature review to gain an understanding of the factors related to attrition and retention.

CHAPTER THREE

LITERATURE REVIEW

3.1 INTRODUCTION

A literature review surveys scholarly articles, books and journals relevant to the topic of interest and aims to critically evaluate and examine key concepts presented within the extensive body of research works. Besides providing an account of what has been published on the phenomenon of interest by accredited scholars and researchers, it also enables the researcher to focus the research problem and objectives, as well as the significance of the study (Jensen, n.d; Libraries USC, 2014). This chapter provides a review of the empirical literature regarding attrition, factors contributing to dropout, trends in student dropout, factors that promote retention of learners, and measures in place to boost retention and reduce dropout rates. The discussion of the evidence highlighting these factors in this section has been aligned to the study objectives. Relevant data bases were searched with certain terms grouped with student attrition to elicit empirical evidence related to the study. The data bases included Education source, ERIC, Humanities source, Health source: Nursing/Academic Edition via EBSCO Host, Africa wide information, CINAHL, Academic search complete, Google scholar and Medline. Previous theses and dissertations, as well as numerous textbooks, were also consulted in relation to the topic.

3.2 PERCEIVED FACTORS CONTRIBUTING TO DROPOUT

Attrition, as presented in the literature, is without a doubt a complex process which deals with a myriad of factors. During the early studies, Tinto (1975) felt that research on dropout from higher education was marked by inadequate conceptualization of the dropout process. This idea still holds true and has been acknowledged by Deary et al. (2003), who suggest that the

problem of attrition is not fully understood and that much remains unknown about the nature of the dropout process. One thing that is certain, according to Urwin et al. (2010), is that student dropout occurs for a variety of reasons. It follows, therefore, that these factors need to be explored if institutions are to devise effective retention strategies.

A number of research studies pertaining to factors contributing to student dropout in higher education have discussed a variety of reasons for attrition obtained from both the students and faculty members of the different institutions. West (2013), who conducted a study on factors associated with attrition in an undergraduate diploma nursing programme in the Western Cape, found that of the 58 participants who were students that had not completed their undergraduate diploma, the majority, 50%, attributed their dropout to personal problems. West (2013) also found that 45% dropped out due to academic requirements, 35% to poor communication with lecturers, 28% due to financial problems, 22% due to lecturers' attitudes towards students, 19% due to health problems and 16% due to clinical requirements. In addition, West (2013), exploring aspects that the students found most stressful, reported that 29% of the participants indicated the subjects, 22% the teaching methods, 19% language, 10% the lecturers, 16% the practicals, 3% financial and 2% indicated colleges and other respectively.

Last and Fulbrook (2003), in their study aimed at establishing the reasons why student nurses leave their pre-registration education programme, also found a number of important issues that may result in student dropout and suggested that these factors appeared to have a cumulative effect that led students to question whether they should continue their education programme. These researchers collected their data from four professional groups namely educators, managers, doctors and qualified nurses (total of 12) to ensure a diversity of perspectives towards the student nurses in which one-on-one interviews were conducted. It was found that all professional groups acknowledged that students were often under

tremendous stress, trying to juggle work, studies, family life, and often second jobs. Using the focus group method, data was also collected from six voluntary student nurses, representing all three years of the pre-registration programme. The results showed a large number of the students (97%) felt that there was too much emphasis on the academic side of their education with 91% feeling that they did not have enough clinical skills, which led them to conclude that students experienced a lack of confidence and knowledge in practical nursing skills, feeling that too much time was spent on the theoretical components of the programme. Last and Fulbrook (2003) also found a significant number of students (75%) admitted that the experience of low morale in the hospitals had negatively influenced their view of nursing. According to the students, nurses were constantly under stress, with never enough time to deliver the high standards of nursing care they would have liked to give based on what they had learnt from theory (Last and Fulbrook, 2003). Additionally, as in the West (2013) study, Last and Fulbrook (2003) also found that financial hardship was a constant strain for 94% of students, with many of them claiming that it had made them consider dropping out of the programme and leaving some of them no choice but to leave.

The findings by Last and Fulbrook (2003) also indicated that 78% of the students felt the content of the education programme did not meet up to their expectations. According to these authors, the students had expected more practical nursing with less emphasis on academic work, and had anticipated greater emphasis on anatomical and disease led approaches. This is similar to the findings of Orton (2011), who emphasised that misconceptions of nurse education and nursing as a career are commonly cited grounds for attrition. These authors argue that unmet expectations are of great relevance to student nurse attrition. They also explained how expectations of the profession are formed and why they are discordant with actual experiences of nursing. This is supported by Granum (2004), who contends that first year nursing students expect to be taught practical caring functions of nursing, yet their

curriculum is actually more directed towards theoretical science subjects. This abstract theoretical care must therefore be incorporated into their perceptions of nursing in order for students to cope with the unmet expectation (Granum, 2004).

Wright and Maree (2007) conducted a study at Tshwane University on first year Baccalaureate nursing students' reasons for dropout, which yielded similar results in regards to students' expectations of nursing as discussed by (Orton, 2011; Granum, 2004; Last and Fulbrook, 2003). According to Wright and Maree (2007), the majority of the 33 prospective nursing students that participated in the study felt that a nurse functions mainly from the affective domain and that they judged themselves to be strong in that respect. Based on the findings, 57% of the students felt that their strength lay in their affective skills, while only 6% considered their strength to be in their cognitive abilities. Wright and Maree (2007) argued that while the affective domain is very important, a registered professional nurse should have a balance between the affective, cognitive and psychomotor domains, with the cognitive domain being most important. Hence, their findings show that the prospective students did not fully understand what innate abilities were required in nursing and that this misconception could lead to attrition when they are faced with reality. These authors suggest that students might drop out of a programme if they encounter academic difficulties or become disillusioned about their choice (Wright and Maree, 2007).

Brodie et al. (2004), in their British study regarding nursing students' perceptions, also shared similar findings with Last and Fulbrook's (2003) study. Their study, which had a sample of 687 current and former students, found that the inaccurate public perception of the nursing profession, the chronic nursing shortage, undesirable working conditions, discordance between nursing philosophy and the reality in practice, and the perceived lack of support were all possible reasons for attrition. They concluded that attrition may occur when the experiences of students are reinforced by both society's and their own negative perceptions of

nursing as an underpaid, overworked profession that lacks respect and has low morale (Brodie et al., 2004).

In Canada, Grainger and Bolan (2006) conducted a longitudinal study using first year and fourth year students to examine the perceptions of nursing as a career choice of students in a four year Baccalaureate nursing programme. The results showed that both groups held a positive image of nursing although the first year students held a more idyllic view of the profession. First year students perceived nurses as kind, compassionate people in an exciting career whereas the finalists were less enamoured with their chosen profession. Their perceptions about nursing being a valued profession were not as strong and 13% considered dropping out prior to graduation. The authors concluded that students may be entering the programme without a thorough understanding of what nursing really is. They therefore suggested that recruitment strategies should strive to portray a more realistic image of nursing. Their recommendations to promote correct perceptions of nursing and attract appropriate applicants included on-going recruitment strategies to attract applicants, presentations on nursing in classrooms and communities, availability of written promotional materials for nursing and nursing programmes and contact opportunities with nurses at career fairs and information booths (Grainger and Bolan, 2006).

Cook (2010), in her study, also found that multiple negative factors coupled together led to stress, which in turn led to attrition. This American study explored the experiences of seven students who had all dropped out at some point on their journey to becoming nurses, left the community college of nursing for a semester or more, had returned and, in the end, successfully completed the nursing programme. The participants expressed that they had experienced increased levels of stress as the programme had progressed and that their coping strategies had been inadequate (Cook, 2010). The findings indicated that when a student's psychic strength is weakened or fractured, they are more likely to drop out of nursing school.

The findings also indicated, however, that a positive attitude highly influenced a student's ability to complete the programme (Cook, 2010).

In another American study by Sadler (2003), the researcher found that of 236 students who had been admitted into a nursing programme, 43 had not completed the programme. Similar to the West (2013) study, the majority of students (32) that had dropped out claimed to have done so due to personal reasons. As for the other students, 3 had been removed for policy violations, 7 although eligible to continue, had dropped out after failing a nursing course, and 1 had failed a nursing course twice and was thus ineligible to continue (Sadler, 2003).

Another study done in the United States by Gardner (2009) also found several factors attributing to attrition. The study involved 60 doctoral students and 34 faculty members from different departments at the institution, one which had been identified as having a high doctoral student completion rate and the other a low rate (Gardner, 2009). According to Gardner (2009), the 34 faculty members who were interviewed identified three main themes why doctoral students had dropped out of their departments. The results show that 53% of the faculty members felt that certain students were lacking in ability, drive, focus, motivation or initiative; 21% felt that certain students should not have come in the first place, and that many of these students just „drift“ into graduate school and are therefore improperly suited; and 15% vaguely felt it was due to personal reasons (Gardner, 2009). Of the 60 students, however, 34% attributed the dropout to personal problems, 30% to departmental issues and 21% just felt it was a wrong fit and not for them (Gardner, 2009).

A study conducted by Lopez-Rabson and McCloy (2013), which aimed at understanding student attrition in Ontario, Canada, also revealed several factors that influenced dropout. The study involved a survey of 1940 participants who had been enrolled in college credentialed programmes in the falls of 2007, 2008 or 2009, who had voluntarily left their institutions at

an early stage and had not re-enrolled (Lopez-Rabson and McCloy, 2013). The study found that institutional factors had influenced the departure of 51.8% of the dropouts. These factors included changes in academic interest/plans (11.5%), loss of interest in or dissatisfaction with their programme (10.6%), academic issues (8.5%), and programme specifications/fit (8.1%), faculty/instructor issues (6.1%), decisions to move to university (5.8%) and issues related to campus atmosphere (1.2%). However, 44.1% indicated that they had dropped out because of personal factors, such as family/personal/health (17.2%), financial reasons (12.8%), employment (8.9%), location (4.1%) and taking time off (1.1%) (Lopez-Rabson and McCloy, 2013).

3.3 TRENDS IN STUDENT DROPOUT

Studies primarily focusing on trends in student dropout are limited. Grebennikov and Shah (2012) suggest that it is important for universities to evaluate attrition trends through systematic feedback from students that have withdrawn from programmes, since this can enable institutions to identify key issues which need to be addressed in order to increase retention. These authors conducted a study in Australia which monitored first year student attrition in a large metropolitan multi-campus university during 2004-2010 in which 2,085 undergraduate students who left the university before the end of their first year of study participated. The study found a consistency in reasons attributed to dropout during the five years in which it was done (Grebennikov and Shah, 2012). According to these authors, the factors attracting the highest importance ratings in students' decisions to leave were a mix of issues that could be addressed by the university as well as more general life factors that were beyond its influence. The findings revealed that students who withdrew indicated that the course was not what they had expected, employment commitments, difficult timetables, family pressures, un-motivating teaching and learning methods, not enough feedback or

individual help from the staff, difficulty in accessing staff, financial difficulties, difficulties with enrolments, feelings of isolation, unclear expectations about what to do for assessments, pressure to enrol for courses they were not really interested in and poorly used online delivery (Grebennikov and Shah, 2012).

A British study conducted by Arulampalam, Naylor and Smith (2007) aimed to analyse the determinants of students dropping out of medical school during their first year. The study took place over a period of ten years as they wanted to compare the results of their analysis over time. These researchers observed that certain factors that led to attrition were associated with conditions at the university rather than student characteristics. The findings revealed that a large proportion of students who had dropped out were international students who had found the tuition more complex than the European students had. Their results also showed that there was a markedly lower dropout rate of students that lived in on-campus accommodation than students living off-campus, which is consistent with the social integration argument. They also found that students who had already been awarded a degree prior to becoming medical students were less likely, on average, to drop out of medical school and that students who were performing well in their studies had a lower dropout rate than those whose performance was poor (Arulampalam et al., 2007).

West (2013) conducted a study in a Western Cape institution, which explored dropout trends in the first, second and third years of study. This author was of the opinion that international trends need to be taken into account in order to determine whether South Africa has a unique problem. The results of her study showed that of the 58 students that had dropped out, the dropout trend according to race was whites 4% (n=2), Xhosa 43% (n=25) and coloured 54% (n=31). The dropout trend according to level of study revealed that 55% (n=32) had dropped out in first year, 41% (n=24) had dropped out in the second year and 4% (n=2) had dropped out in the third year. This finding supports the findings of other researchers that most students

drop out within the first year (Grebennikov and Skaines, 2008; Gabb et al., 2006; McMillan, 2005; Nora et al., 2005; Last and Fulbrook, 2003). Likewise, a Turkish study by researchers Baykal, Sokmen, Korkmaz and Akgun (2005), which aimed at determining student satisfaction in a nursing college, yielded a similar finding. The study assessed the level of satisfaction of the 694 students within a four year programme at the nursing college during the years of 1999, 2000 and 2001. They found that third year students had the highest level of satisfaction in their programme with less stress as compared to first, second and fourth year students (Baykal et al., 2005). A surprising finding, however, was noted. Contrary to the belief that first year students endure the most stress, Baykal et al.(2005) found that it was the fourth year students in their study who had the lowest level of programme satisfaction. The reason for the high level of stress was attributed to the heavy work load of projects, assignments and examinations during the fourth year.

In a study titled *Identification of At-Risk Nursing Students*, Hopkins (2008) aimed to identify factors that significantly explain the first-semester success of nursing students. Data was obtained from 383 associate degree nursing students at a small, private college of health sciences in the United States. The trend noted was that students who had passed the Nursing Fundamentals course in their first year were more successful (Hopkins, 2008). According to Hopkins (2008), of the new nursing students who matriculated between 2001 and 2004, 68 (17.75%) were unsuccessful and had a final grade below 80 in the Nursing Fundamentals course, while 315 (82.25%) were successful with a final grade of 80 or above in the course.

3.4 FACTORS THAT PROMOTE RETENTION OF STUDENTS

With a growing interest by researchers in unveiling reasons attributed to attrition in higher education, it is no surprise that others have been interested in exploring factors that promote retention of students which in turn reduces attrition. Jeffreys (2012) describes student

retention as the continuous enrolment in a programme, whether part-time or full-time, by taking the required courses sequentially until meeting the programme's graduation requirements; possibly including courses repeated for previous withdrawal and/or failure. According to Jeffreys (2012), student retention is a dynamic and multidimensional phenomenon that is influenced by the interaction of multiple factors. Authors Yu et al. (2010) state that student retention is an important issue for all university policy makers due to the potential negative impact on the image of the university and the career path of the dropouts. The few studies found that will be discussed in this section have shown that a variety of factors ranging from student satisfaction to faculty/student relationships are all key in influencing student retention.

Kuh, Cruce, Shoup, Kinzie and Gonyea's (2008) research on undergraduate education has shown that the satisfaction that students experience academically, socially and culturally is correlated with engagement and ultimately retention in degree programmes. This is evident in the findings of Crede and Borrego (2012), who hypothesized that students whose expectations have been met across a variety of levels are more likely to be satisfied and engaged in their degree programmes, which in turn leads to their success. In this study, online surveys were administered to 640 engineering PhD students from 5 international regions in four universities across the United States during fall of 2010 and the overall finding was that the majority of students who were satisfied holistically with their graduate experience were more engaged in the programme (Crede and Borrego, 2012).

Research has shown that a focus on student engagement can enhance student retention. Kuh, Kinzie, Schuh and Whitt (2005) define student engagement in terms of two components. First is the amount of time and effort a student spends on academic activities that lead to student success and secondly it is the amount of resources and services that an institution allocates to encourage students to participate and benefit from these services. The results of studies

conducted at the Indiana University Centre for Postsecondary Research consistently showed the positive impact of student participation in educational practices. Furthermore, the results also showed that the performance of at-risk students in terms of grades and persistence improved when they engaged in effective educational practices (Kuh, Kinzie, Bridges and Hayek, 2007).

Thomas (2002) also suggests that a wide range of interacting personal and social attributes, as well as institutional practices, impact on both retention rates and performance. The findings of her study, which examined some of the issues surrounding student retention in higher education in England, discovered that student retention falls in line with the following themes; academic preparedness; the academic experience (including assessment); institutional expectations and commitment; academic and social match; finance and employment; family support and commitments; and university support services (Thomas, 2002).

Using six focus groups of between five and six participants to assess student's perspectives, the study found that although students were faced with multiple challenges, such as financial problems and having to dedicate a lot of time to work to cover their debts, they were still eager to complete their programme. Although 87.5% of the participants agreed to being concerned about financial problems, their motivating factor to not drop out of the programme was attributed to a positive staff and student relationship. The students indicated that they gained both self-confidence and motivation because the teachers believed in them and cared about the outcomes of their studying and, as a result, their work improved. Students in the study also expressed the importance of having a friendly relationship with their lecturers since this made them easier to approach if they were struggling with the course work (Thomas, 2002). The results demonstrated that it is important for students to feel accepted and respected by their lecturers or tutors and that one of the aspects of the university

experience that seems fundamental to the decision of students as whether or not to stay at university was the extent to which they had good friendships and social networks that provided support to overcome difficulties (Thomas, 2002).

Roberts and Styron's (2010) study aimed at investigating students' perceptions of services, interactions, and experiences at the College of Education and Psychology in the United States further supports Thomas's (2002) findings. According to their study, the majority of students who dropped out of the programme in the fall semester of 2008 had statistically significant lower perceptions of faculty/staff approachability than those students who did persist. This finding substantiates the importance of staff attitude in retaining students, as discussed by Thomas (2002). Likewise, another study in the United States, carried by Stallone (2011), on factors associated with student attrition and retention in an educational leadership doctoral programme found similar results. This researcher found that the human factor (faculty-student relationships and programme culture), as it was termed in the study, significantly affected retention. The sample population of the study consisted of 140 doctoral students who had completed the programme. On being asked how they had perceived different aspects of their doctoral programme experience and what had helped them to finish, the majority (77%) strongly agreed that human factors had played a large role in their success. Of those 77%, 39% specifically attributed their success to faculty-student relationships (Stallone, 2011).

Lotkowski, Robbins and Noeth (2004), in their American study, found that academic-related skills, academic self-confidence and academic goals highly influenced retention of students in the colleges under study. According to these authors, institutional commitment, social support, the contextual influences of institutional selectivity and financial support, and social involvement had a moderate relationship with student retention, while achievement motivation and general self-concept had a weak relationship. They also found that the

contextual influence of institutional size had no relationship to college retention (Lotkowski et al., 2004).

3.5 MEASURES THAT CAN BE PUT IN PLACE TO IMPROVE RETENTION AND REDUCE DROPOUT RATES

The studies that have been discussed have provided some insight into factors that lead to attrition and influence retention. However, in order to come up with strategies that can improve student retention it is also necessary to consider factors that are associated with students' success. Crosling et al. (2008) state that the cost of not retaining students, both financially and in terms of prestige, are substantial at an institutional level, which substantiates the need for the development of effective strategies to retain students. A few studies to be discussed under this section have highlighted some strategies that have worked, while most have provided recommendations of what strategies should be put in place to rectify the problems noted in their findings.

Sadler (2003) conducted a retrospective study at an American university which showed the effectiveness of an essay writing strategy, which is an entry requirement into the nursing programme, in identifying students at risk for attrition. In this study, the essays of 236 students from the Baccalaureate nursing program were analysed to assess whether there were differences between students who had completed the programme (193) and those who had dropped out (43). Findings revealed that dropouts tended to write about nursing as external to themselves, in contrast to the completers, who described an internalization of the role. It was concluded, therefore, that if institutions paid more attention to essays written by prospective students during the recruitment process, they would be in a better position to identify which students are at risk of dropping out of the programme based on how these students perceive nursing (Sadler, 2003).

Forret et al. (2007) also presented some strategies based on the findings of their New Zealand study, which aimed at exploring the nature of learning communities in tertiary science and engineering programmes. Participants included a total of 660 students and 14 staff members from four different institutions and both students and teachers in all institutions commented that it was important to develop positive working relationships within the tertiary science and engineering community and that such relationships applied to both teacher-student and student-student relationships. Teachers felt it was important to get to know their students and show concern for their progress, both academically and personally, as they believed this would help foster a relaxed teaching environment which encouraged student participation. The teachers also saw practical classes as venues for greater relationship development as the more informal teaching situation allowed more time for one-to-one conversation. Moreover, a good teacher-student relationship was seen to assist teachers in accurately gauging student progress (Forret et al., 2007).

Forret et al (2007) argued that although students' transition to tertiary study was generally characterised by a need for them to become more independent, self-reliant and proactive in their learning, successfully adapting to a tertiary study environment, however, appeared to take most students several months, with the transition more difficult for students who had come straight from high school. The results of their study showed that students found that an important factor in facilitating their transition into the programme was being able to quickly form relationships and connections with teachers and other students (Forret et al., 2007). They therefore deduced from their findings that the lack of positive relationships and difficulties in transitioning puts students at risk of attrition. As a way of rectifying the problem, these authors suggested a few strategies to help boost retention and minimise attrition. They recommended that institutions need to facilitate the development of positive teacher-student and student-student relationships as early as possible in a student's time at the

institution; devise ways of helping students become more involved in the wider cultural and sporting activities of the institute; create and/or maintain small class sizes to maximise learning opportunities through personal interaction and relationship-building; help teachers develop methods to deliver high levels of subject content in student-centred ways; and ensure that teaching, learning and research are equally valued within the culture of the institution.

A study conducted by Scott, Shah, Grebennikov and Singh (2008) in 14 Australian universities show that adopting a more flexible and responsive approach to course design and attention to the overall student experience motivates students to engage in learning and persist. The author identified various factors that promoted student retention, which included the presence of a supportive peer group; staff that were accessible and responsive to student needs; a coherent, flexible and clear course design that uses a variety of teaching and learning methods; and efficient and accessible IT, library and student support mechanisms. These recommendations were supported by Long, Ferrier and Heagney (2006), who identified similar strategies to improve retention in Australian universities. These included the provision of detailed information about courses prior to student enrolment, academic support services customised to suit student's needs, and the provision of financial aid in the form of scholarships, internet access, printing costs and books. The regular monitoring of withdrawal and examining the patterns of attrition was also recommended.

Campbell and Mislevy (2012) also recommended various strategies as a result of the findings of their study on students' perceptions, which surveyed 2084 first year students. This American study found that there are certain perceptions and demographics that are related to the relative risk of stopping-out, dropping-out or transferring out, as compared to being continuously enrolled. They also found that the general attitude towards an institution seemed

to be related to subsequent enrolment pattern. They argued that students can detect early on in their experience whether the campus is a good fit for them or not, which means that institutions can detect early which students would be at risk for dropping out of a programme. Campbell and Mislevy (2012) suggested that an advisor or a resident assistant can identify many of the issues discussed as early as eight weeks into the semester through a few simple questions that could be asked, and by looking at institutional records. They also state that the general attitude of students toward an institution plays an active role in subsequent enrolment patterns and suggest that faculty administrators and staff can take a proactive approach by asking students first-hand what is behind their attitude toward university and what might enhance their experience. They also suggest that the institutions that have ample resources for its undergraduate students should make an effort to guide students to these resources, which could positively affect their future enrolment decisions (Campbell and Mislevy, 2012).

Lawrence (2005) supports the suggestions of both Campbell and Mislevy (2012) and Forret et al. (2007), arguing that university teachers have an important role to play in clarifying academic expectations and helping students to develop strategies that will assist them to succeed in the university learning environment. According to Lawrence (2005), this includes assistance to develop reflective and critical skills as well as socio-cultural competencies.

Wells (2003), in a study titled *An epidemiological approach to addressing student attrition in nursing programs*, came up with three prevention measures to address attrition and these are classified as primary, secondary and tertiary prevention strategies. The primary preventive measures include more public awareness concerning the realities of the nursing profession and the nursing curriculum whereby those interested in nursing are given accurate information about the rigors of nursing so that nursing as a career is chosen for the correct reasons; ongoing continuation education programmes for lecturers; and the development of an institutional think tank on student retention. Secondary prevention measures include

conducting student satisfaction surveys; developing criteria to identify students at risk; and conducting a trend analysis on the number and percentages of students who dropout. A tertiary prevention measure would be the conducting of exit interviews to determine if the reasons that resulted in dropout could have been prevented (Wells, 2003).

3.6 INTEGRATION OF FINDINGS AND TINTO'S CONCEPTUAL MODEL

As presented in chapter two of this study, Tinto and Pusser (2006) conceptual model, which has been adapted to this study, suggests that multiple factors which are intertwined affect the attrition process. Tinto's (1975) model suggests that individuals enter institutions of higher education with a variety of attributes, precollege experiences and family backgrounds, all of which have a direct or indirect impact upon their performance at college. More importantly, these background characteristics and individual attributes also influence the development of the educational expectations and commitments the individual brings with him into the college environment. Additionally the individual's goals and institutional commitments are both important predictors and reflections of the person's experiences, disappointments and satisfactions in that college environment. The model argues, however, that in addition to prior experiences, individual characteristics and commitments, it is the individual's integration into the academic and social systems of the college that most directly relates to his continuance at that college (Tinto, 1975).

Most of the studies that have been referred to in this chapter supported the underlying theories presented by this model. For instance, numerous studies discussed have shown how both academic and social factors surrounding an individual interplay and influence their decisions whether to drop out of a programme or continue and succeed.

In moving towards a model of institutional action, the authors Tinto and Pusser claim that although academic and social factors outside an institution do have an effect on student

attrition, they point to factors within institutions of learning that can do much to promote student success (Tinto and Pusser, 2006).

3.7 SUMMARY OF THE CHAPTER

This chapter presented a review of the literature to gain an understanding of the factors related to attrition and retention. Several sources were consulted to find the literature and these included the internet, textbooks, previous theses and dissertations.

The next chapter presents information regarding the research design and methodology of this study, with special reference to a mixed methods research approach using a case study design.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter describes the research methodology that was used to guide the study and covers critical aspects that must be considered in empirical studies. This study used a mixed methods approach and a case study design, using two campuses which served as the units of analysis. Both quantitative and qualitative methods were used for sampling, data collection and data analysis, thereby achieving triangulation of data. Reliability, validity and ethical issues associated with the study are also presented.

4.2 RESEARCH PARADIGM

A pragmatic stance was adopted in this study that uses a mixed methods approach and a case study design. The basic idea is that pragmatism is not committed to any one philosophy and reality. Pragmatists do not see the world as an absolute reality (Creswell, 2007).

The philosophy of pragmatism advances the notion that the consequences are more important than the process and therefore that „the end justifies the means“. It advocates eclecticism and „a needs-based or contingency approach to research method and concept selection“ so that researchers are free to determine what works to answer the research questions (Doyle, Brady and Byrne, 2009; Hanson, Creswell, Clark, Petska and Creswell, 2005; Johnson and Onwuegbuzie, 2004). The pragmatic approach to research is informed by the belief that the practicalities of research are such that it cannot be driven by theory or data exclusively and a process of abduction is recommended, which enables one to move back and forth between induction and deduction through a process of inquiry (Morgan, 2007).

Pragmatism, therefore, serves as a bridge between conflicting paradigms in complex social worlds (Johnson and Onwuegbuzie, 2004). These authors advocate for pragmatism as the philosophical partner for mixed methods research. They support the view that mixed methods researchers use a method and philosophy in which the insights provided by both quantitative and qualitative research work together into a workable solution. The worldview of pragmatism focuses on the outcomes of the research (the actions, situations and consequences of inquiry) rather than antecedent conditions, with the most important aspects being the problem that is being studied and the questions that are being asked about the problem (Johnson and Onwuegbuzie, 2004).

According to Sharp, Mobley, Hammond, Withington, Drew, Stringfield et al. (2012), the complex nature of the social world requires a more fluid understanding and application of the relationship between philosophical paradigms (assumptions about the social world and nature of knowledge), methodology (the logic of inquiry) and methods (techniques of data collection). They contend that flexibility inherent in a pragmatic approach to research is especially important in complex case studies that use mixed methods approach (Sharp et al., 2012). Pragmatism recognizes the importance of eclecticism and pluralism whereby *“different, even conflicting theories and perspectives can be useful; observation, experience and experiments are all useful ways to gain an understanding of people and the world”* (Johnson and Onwuegbuzie, 2004). From a pragmatic perspective, *“knowledge is viewed as being both constructed and based on the reality of the world we experience and live in”* (Johnson and Onwuegbuzie, 2004).

The pragmatic paradigm was appropriate for this study because it aimed to gain an understanding of the phenomenon of attrition from the perspective of participants using a

mixed methods approach. A pragmatic paradigm provides some flexibility by allowing the researcher to determine what works best to answer the question.

4.3 RESEARCH APPROACH

A mixed methods approach was adopted in this study. Mixed methods design combines quantitative and qualitative methods. Historically, in brief, mixed methods design is referred to as the third methodological movement of the twentieth century. The emergence of this approach shook the high ground of long existing logical positivism. The prominence of this approach was observed in the 1990s as a way of extending the gamut or scope of social science and health research (Creswell, 2013; Giddings, 2006). It was seen as an emerging „new paradigm“ bridging two distinctly diverse qualitative and quantitative paradigms. It was argued that combining these two together and combining the findings would give more evidence, more certainty and therefore more confidence in the „truth value“ of the outcomes (Giddings, 2006). This author claims that evaluation research has been using the mixed methods approach since the early 50s in exploring issues where very little is known. Denzin and Lincoln (2005) promoted the use of mixed methods to ensure confidence in conclusions made. The mixed methods movement is undoubtedly still in the process of developing its philosophical and theoretical base. Tashakkori and Teddlie (2010) advocate that there is wide consensus that mixing different types of methods can strengthen a study. Mixed methods study involves collection or analysis of both quantitative and qualitative data in a single study. Quantitative and qualitative data are increasingly available for use in studying social science research problems. The use of multiple methods neutralize disadvantages of certain other methods (Tashakkori and Teddlie, 2010).

Creswell (2013) came up with three categories of mixed methods approach, namely

(a) sequential, (b) concurrent and (c) transformative. Each of these categories has two strategies.

The sequential category contains sequential explanatory and sequential exploratory strategies. These strategies rely on a simple linear two-phase model moving from either quantitative to qualitative methods (sequential explanatory) or visa-versa (sequential exploratory), as stated in (Creswell, 2013). Analysis of data is done separately in each phase, with interpretation of all the results from both qualitative and quantitative methods taking place in a final stage.

The concurrent strategy triangulates these two methods (qualitative and quantitative) with the aim of triangulating the findings of a single case study. Creswell (2013) described concurrent triangulation strategy as the most familiar mixed method approach. This strategy uses different methods of data collection concurrently, depending on the question being asked, to triangulate findings within a single study. Although there is triangulation of methods, data collection is done separately using the best tool to collect the required data for each methodology. Another type in this category (concurrent category) is concurrent nested strategy. This strategy uses a single data-collection phase, drawing on qualitative and quantitative methods. In this strategy one method dominates and embeds the other because the embedded method pursues a separate question from the dominant method (Creswell, 2013; 2009).

The transformative strategy consists of the sequential transformative strategy and concurrent transformative strategy. Sequential transformative strategy advances the two-stage strategy highlighted in sequential strategy above. Transformative concurrent strategy advances sequential strategy through an explicit commitment to a particular theoretical perspective guiding the decisions of the researcher(s) in design, analysis and interpretation. Either qualitative or quantitative approaches can dominate in this strategy, depending on the

theoretical commitments of the study at that time. The concurrent transformative strategy also commits to a distinct theoretical perspective as in the sequential transformative strategy, but the design has features of either the triangulation (use of different data collection methods) or nested strategies (where a single data-collection phase is used, drawing on qualitative and quantitative methods) (Creswell, 2013).

In this particular study, concurrent triangulation was adopted, where both qualitative and quantitative tools were used to collect data within a case at the same time, for an in depth understanding of the complex phenomenon of attrition of student nurses within the four year comprehensive nursing programme at a selected nursing college. Data was analyzed separately, but interpretation was done concurrently, as proposed in concurrent triangulation strategy.

4.4 RESEARCH DESIGN

A case study design was adopted in this study. A case study design supports the mixed methods approach as it enriches the quality of data generated because of its holistic nature of inquiry. According to Crowe, Creswell, Robertson, Huby, Avery and Sheikh (2011), it is particularly useful to employ a case study design when there is a need to generate a multifaceted understanding of a complex issue in its real life context or to obtain an in-depth appreciation of an issue, event or phenomenon of interest in its natural real-life context, as is the case in this study.

There are multiple definitions and understandings of using a case study design as a research method (Zucker, 2009). Case studies can be either single or multiple case designs. Variations occur within each of these two designs resulting in four types of designs: single-case (holistic) design, referred to as Type 1; single-case (embedded) design, referred to as Type 2; multiple-case (holistic) design, referred to as Type 3; and multiple-case (embedded) design,

referred to as Type 4. Embedded designs have multiple units of analysis embedded within the case, whether it being a single or a multiple case design (Yin, 2014).

According to Creswell (2007), the selection of the type of case study design, whether single or multiple, is guided by the goal of the study, the purpose of the research, the research problem and the questions to be answered. In this particular study, a single embedded case study design was adopted; the phenomenon of interest being the attrition of student nurses within a college of nursing. The college served as the single case and two out of its ten campuses served as the embedded units of analysis within the single case. In case study design, the units of analysis are a critical factor as they add opportunities for extensive analysis, thus enhancing the insights into a single case (Yin, 2014). Merriam (2002) explains that the units of analysis serve as the vehicle to better understand the issue or issues.

There are four main characteristics which are regarded as essential properties of a case study (Merriam, 2002). Accordingly, a case study should be (a) particularistic, (b) descriptive, (c) heuristic and (d) inductive. To elaborate briefly on these, particularistic means the case focuses on a particular situation, event, programme or phenomenon. In this study “attrition” is the area of focus. This serves as a boundary for the case that is being studied to allow for a holistic view of the situation. Descriptive means that the end product of a case study is a rich, thick description of the phenomenon under study. It involves documentation of events, quotes, samples and artifacts (Merriam, 2002). This will be observed in Chapter Five, the data analysis in this study. Heuristic means that it illuminates understanding of the phenomenon under study by bringing about the discovery of the meaning, extending the reader’s experience or confirming what is known. Inductive means cases usually rely on inductive reasoning. Generalizations, concepts or hypotheses emerge from an examination of data gathered in the context itself (Merriam, 2002).

This study bears all of the above characteristics. Student attrition in a selected college is the focus of this study (*particularistic*). The intention of studying the phenomenon student attrition is to get a deeper understanding of the phenomenon in its natural setting and generate meaning from it (*heuristic*). The data was interrogated thoroughly during the analysis phase, engaging in *inductive* reasoning process to make meaning out of the collected data. Once, data was analyzed and interpreted, the process culminated with a rich thick description of the phenomenon of interest within the selected case (*description*).

4.5 CASE STUDY PROTOCOL

A case study protocol relates to the internal rules and procedures that must be followed to guide the study. It is important that the researcher remains focused on all the procedures throughout the study as it is a major tactic in increasing the reliability of case studies. The case study protocol includes the overview of the case study project; the case study questions and objectives; data collection procedures (field work procedures) and guide for the report (Yin, 2014). (Refer to Annexure 1).

4.6 RESEARCH SETTING

In a case study design, research takes place in a natural setting, which is the context within which the phenomenon to be explored occurs. The phenomenon and setting are a bounded system. The boundaries are set in terms of time, place, events and processes (Tellis, 1997). In this study, the bounded system is a selected College of Nursing in KwaZulu-Natal. The colleges comprise of twenty five nursing education institutions and are referred to as campuses and sub/campuses. Ten of which offer the four year comprehensive nursing programme and is located throughout the KZN province. The province is described as having a northern and a southern region (Figure 3 college organogram). Six of the campuses are located in the southern region and four in the northern region of the province.

The college is unique in that it has an administrative component referred to as the Head Office. The principal and four vice principals of the college, who have a coordinating function for the whole system, are based at the head office and student support would be a component of the head office structure. The students, lecturing personnel and heads of campuses (principals) are all based at the campuses. The head office administers all the examinations for the four year comprehensive nursing programme, from the planning phase to publication of results. Learner records for all the campuses are maintained at the head office and are also available at the campuses. The researcher is based at the head office and is responsible for overseeing student affairs. The environment of each campus is unique to its geographical location and infrastructure development. The main language spoken is English, but isiZulu and a mix of other languages are also spoken.

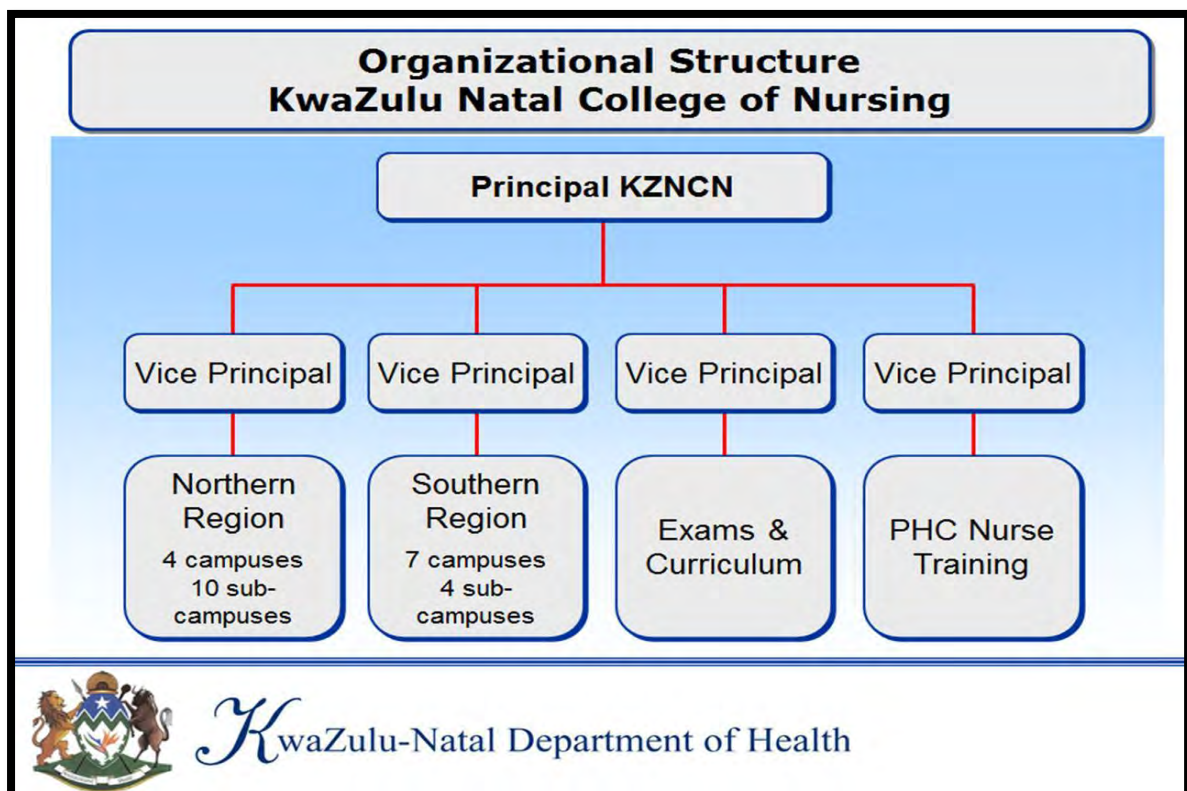


Figure 3: Organizational structure of the college. (KZN College of Nursing, 2005)

4.7 SELECTION OF RESEARCH SITES

All of the ten campuses are similar in structure, function, staffing norms, student enrolment criteria, curriculum design and examinations. According to Creswell (2007), researchers typically choose not more than four or five sites in case study designs as the idea is to get enough information to present an in-depth understanding of the phenomenon of interest. Zucker (2009) further states that using all ten campuses would be time consuming, uneconomical and exhausting.

Therefore, two campuses (units of analysis) from different geographical locations were purposely selected from the ten campuses to conduct an in-depth understanding, exploration and analysis of the issue of attrition of student nurses. One campus was chosen from the northern region within the UThungulu district and the other campus from the southern region within the UMgungundlovu district (Figure 4 Map of KwaZulu-Natal). The two units are representative of the college and are big campuses with larger student enrolment numbers than some of the smaller sites. The northern campus is more in a rural area, while the southern campus is more urban. This type of selection will facilitate comparison of data and for the college to establish a common understanding of the problem. Tellis (1997) notes that results are strengthened when similar patterns are found in multiple sites. Matching data thus increases confidence in the results.

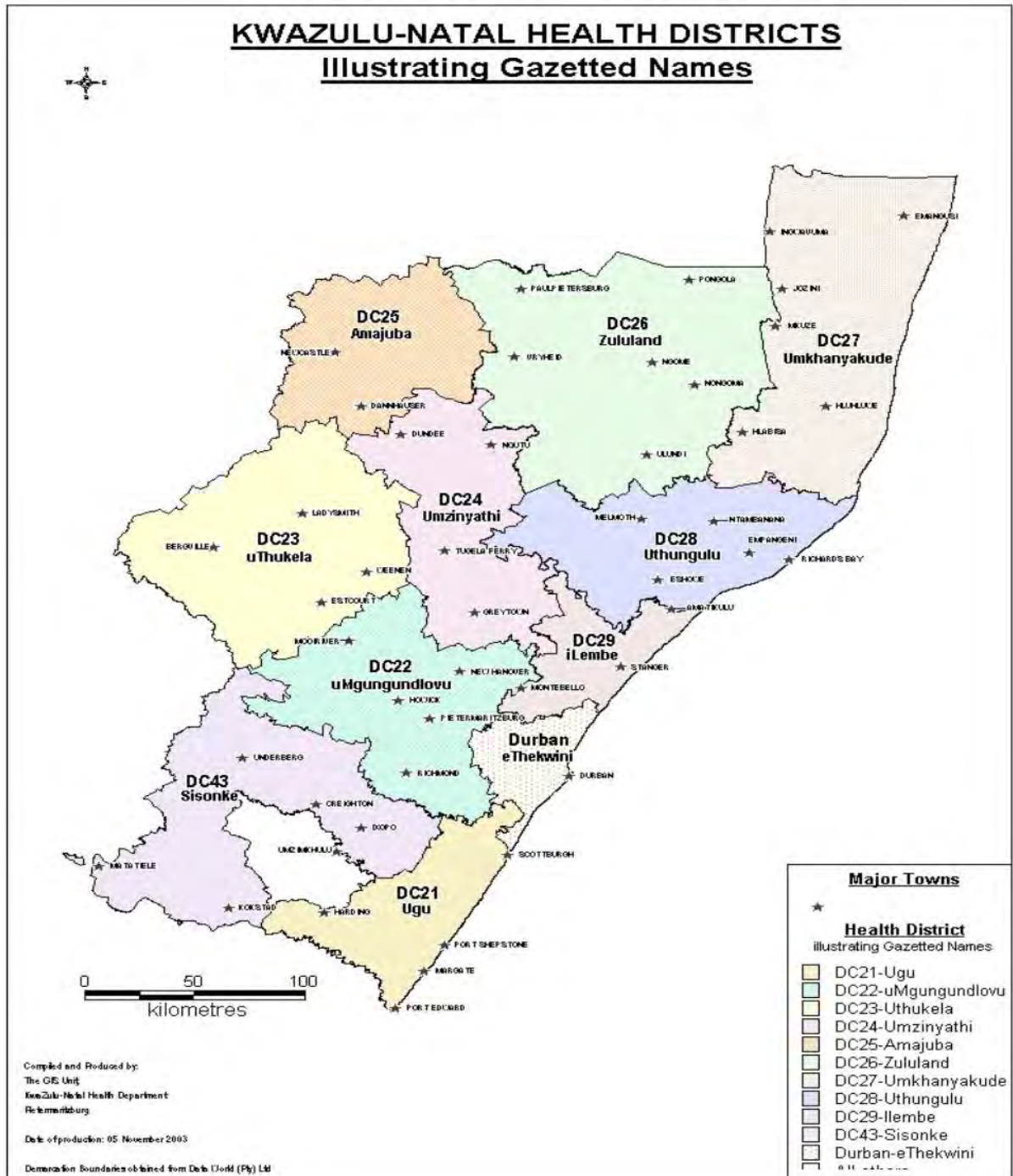


Figure 4: Map of KwaZulu-Natal: (KZN Department of local government and traditional affairs, 2006)

4.8 STUDY POPULATION

The concept population refers to the entire set of persons or elements that is of interest to the researcher and that conforms to a set of criteria in respect of what is being studied (Polit and Beck, 2008). This study involved stratification of the population for sampling purposes. Stratification implies that specific characteristics of individuals are represented in the sample, such as gender, education or income levels.

In this study, the student population was stratified according to those that were in the programme (current students) and those that left the programme (non-returning students). The current students were further categorized according to their level of study and study progress. The academic staff population was stratified according to their status in the campus, namely the principal and senior academic staff.

Since this was a mixed methods study, the populations for the quantitative and qualitative components are described concurrently. For the quantitative aspect, (table1) the accessible population for current students was 320 students in each unit of analysis (campus). The accessible population for non-returning students was 20 from the southern campus and 35 from the northern campus.

Table 1: The nursing student population

Campus	Current Students	Non-returning Students
South	320	20
North	320	35

For the qualitative part the population of academic staff (Table2) consisted of the Campus Head (Principal); the Deputy Principal and the five heads of department (HODs) that oversee the core nursing subjects for each of the two campuses.

Table 2: The academic personnel population

Campus	Academic Personnel	Number
South	Principal	1
	Deputy Principal	1
	Heads of department	5
North	Principal	1
	Deputy principal	1
	Heads of department	5

4.9 SAMPLING

Sampling can be a single stage, multistage or clustering design. Single stage sampling is where the researcher can sample the elements directly. In a multistage or clustering procedure, the researcher first identifies the groups or clusters and then samples within the groups (Creswell, 2009). In this study, a multistage sampling design was used wherein the population for the students and academic staff was first identified and the sampling was done within the groups.

4.9.1 Sampling criteria

The sampling criteria refer to the characteristics that are essential for inclusion in the target population (Polit and Beck, 2008). In this study the inclusion criteria were as follows:

Quantitative component

- Student nurses (male and female) progressing well in the programme;
- Student nurses (male and female) who experienced academic failure in the programme;

- Non- returning students.

Qualitative component

- Academic personnel: the Principal, as head of the campus, the Deputy Principal and the five heads of disciplines representing core nursing courses;
- Students who experienced academic failure;
- The leader of the student body, as the overall representative of the student body.

4.9.2 Sampling of respondents

Determining the sample size in mixed methods research typically involves combining two different sample sizes, a larger size in the quantitative component and a smaller size in the qualitative component (Tashakkori and Teddlie, 2010). As this study used a mixed methods approach, the researcher used various sampling methods to select the sample. The quantitative component was the larger size and the qualitative component was the smaller size.

Sampling for the quantitative component: The study targeted current and non- returning students (dropouts) from each of the two campuses. Probability and non-probability sampling methods were used for the quantitative aspect. A formula was not used to determine the sample size as this descriptive case study did not involve hypothesis testing. Additionally two units of analysis (campuses) were used which had a large homogenous population. Two groups, current students and non-returning students were targeted from each campus as follows. The sampling methodology adopted was the same in both campuses:

GROUP 1: current students

Student nurses who were progressing well

A probability sampling technique was used to sample this category. Thirty percent (30%) of the accessible population of 320 students were targeted for this group which yielded 96

participants per campus. Random sampling was done by selecting random student numbers from the class list (Burns and Grove, 2010). These students were further stratified equally into the four levels of study, namely the first, second, third and fourth year levels, resulting in a representation of 24 students per level of study. Male and female students were represented at all levels.

Student nurses who had experienced academic failure

Purposive or non-probability sampling was used to target all students (100%) who had experienced academic failure (Creswell, 2013). This yielded to 94 students in the north campus and 64 students in the south campus. These students were targeted since their views and experiences were critical in understanding reasons for dropout. Non-probability sampling uses the judgment of the researcher to select those subjects who can generate a wealth of detail, who know most about the phenomenon and who are able to articulate and explain nuances to the researcher (Tashakkori and Teddlie, 2010). The student class list was used to identify and select all the students who met the inclusion criteria in that they had experienced academic failure at some stage during their studies.

GROUP 2: non-returning students

A hundred percent (100%) of the accessible population was used to target the non-returning students (dropouts) using a convenience sampling approach. By using student data from the campuses where they had been studying, twenty (20) students were identified in the southern campus and 35 students in the northern campus.

Table 3: Summary of sample targets for quantitative component

Students targeted		North campus	South campus
Current	Progressing well	96	96
	Experienced academic failure	94	64
Total for current students		190	160
Non returning students		35	20

Sampling for the qualitative component: Criterion-based or purposive sampling was adopted in this study. Criterion-based sampling is based on a set criteria or standards necessary for units to be included in the research study (Yu et al., 2010). Tashakkori and Teddlie (2010) further define this as a type of sampling in which settings, persons and events are deliberately chosen for important information they can provide that cannot be obtained as well from other sources. The most useful way to look at a qualitative sample size involves saturation of information (Tashakkori and Teddlie, 2010). Case studies do not need to have a minimum number of cases, but researchers are to work with the situation that presents itself (Yin, 2014).

In this study sampling for the qualitative component was done as follows:

Sampling of student nurses for focus group interviews

A criterion-based or purposive sampling technique was used to select student nurses to participate in face to face focus group interviews. As a general rule of thumb, three to four focus groups are adequate in focus groups studies (Yin, 2014). There were two focus groups, one for the northern campus and the other for the southern campus. The nine participants in each focus group included the leader of the learner representative council and eight students who had experienced academic failure. There were two students from each level of study to ensure representation, and the groups comprised of both males and females. Focus group

interviews complemented the data collected through the student questionnaire and added to the richness of data gathered (Tashakkori and Teddlie, 2010; Polit and Beck, 2008). Focus group interviews not only allow for diversity of views, but also enable the researcher to identify common patterns of responses amongst participants which enhance the reliability of the facts that have been gathered (Tashakkori and Teddlie, 2010). The researcher believed soliciting data from these groups of students would provide a better understanding as to why students leave before completing their studies. The leader of the learner representative council was selected as he had most contact with the student population and was aware of students' general concerns, problems and difficulties, including those that had dropped out of the programme, and would thus be a good source of information.

Sampling of senior academic personnel

A criterion-based or purposive sampling technique was also used to select the participants for senior academic personnel focus group interviews. Two focus groups were selected one for each campus. Each focus group comprised of six participants, the five heads of disciplines who were responsible for the core nursing subjects, and the deputy principal who also serves as a subject head were selected to participate in the group interview. The two principals as heads of campus were interviewed separately to obtain their views on the topic of attrition of student nurses. The researcher believed that these participants were in a good position to provide data from an educational and administrative perspective for nurse training. They would be able to contribute to exploring attrition from all phases of the conceptual framework, namely the pre-enrolment and integration phase, the institutional engagement phase and the resultant student outcomes. The data gathered provided a rich source from which data analysis was done.

Sampling of Documents

Yin (2014) asserts that documentary information and analysis is relevant to every case study. All documents that provided information on the phenomenon of student attrition were therefore purposively targeted. These included documents as far back as 2005, when the amalgamated college came into existence. The documents included the student prospectus, referred to as the learner information guide and rules, which gives information on courses done in the programme, examination rules, promotion and demotion rules and the duration of training; student statistics, covering student enrolment, examination results, completion of training data, attritions and reasons; recruitment and selection policies; and any other documents that may answer the question of interest at that time. The most important use of documents is to corroborate and augment evidence from other sources (Yin, 2014).

4.10 DATA COLLECTION METHOD AND INSTRUMENT

A case study approach involves the collection of multiple sources of evidence in order to get a thorough understanding of the phenomenon of interest in the study. These include documentation, archival records, interviews, direct observations, participant observations and physical artifacts (Yin, 2014). There is high advocacy for multiple sources of data (data triangulation) as a way of increasing the internal validity of the study (Stake, 1995). An underlying assumption is that data collected using different tools should yield similar conclusions, and approaching the same issue from different angles can help develop a holistic picture of the phenomenon (Crowe et al., 2011).

4.10.1 Quantitative component

A self-administered questionnaire (refer Annexure 2) was used to collect data from students for the quantitative aspects. The advantage of a questionnaire is that it can reach a large number of participants to obtain specific data in a short space of time, while the disadvantage

is that the information obtained may be superficial and lacking in in-depth details (Grove, Burns and Gray, 2012). The questionnaire was adapted from a number of instruments, including Bower and Meyer's Manual for Attrition Survey (Bower and Meyers, 1976); the Perceived Faculty Support Scale (Shelton, 2003); and Rutgers's Graduating Student Opinion Survey (Surveys: Office of institutional research and academic planning, 2008-2009).

The questionnaire was designed to measure constructs from the conceptual framework which guided this study to answer the research questions. The questionnaire was divided into three sections: *Section A* dealt with student demographics (12 items); *Section B* related to nursing knowledge and perceptions of nursing (5 items); and *Section C* related to academic variables listed as follows;

- Level of difficulty of courses/subjects in the four year nursing programme (9 items);
- Reasons that may lead to poor academic progress, grouped into academic reasons (10 items); personal circumstances (7 items); financial reasons (4 items); social integration (6 items); and student support (5 items); and
- Level of satisfaction with the programme (22 items).

The responses to items were scored using a Likert scale. The instrument also had a few open ended questions to allow the participants to freely express their opinions, experiences, perceptions and recommendations. The questionnaire was coded according to the different groups of students. The questionnaire for the non-returning students was slightly adjusted and was therefore not identical to the questionnaire for current students. The adjusted questionnaire included additional items such as *what are you currently doing; how long were you enrolled for before you left the campus/college; at what level of your study did you leave college and how many months has it been since you withdrew from the college of nursing.*

The codes used were as follows;

- APS: Academically progressing well in the southern campus
- AFS: Academic failure in the southern campus
- APN: Academically progressing well in the northern campus
- AFN: Academic failure in the northern campus
- TSS: Terminated student in the southern campus
- TSN: Terminated student in the northern campus.

4.10.2 Qualitative component

A semi-structured instrument was used to collect data during focus group interviews. In-depth focus group interviews were conducted in both of the campuses, one for a small group of students and another for senior academic staff. The interviews were guided by using semi-structured questions. The interview guide for the students (refer Annexure 3) was similar to that for the academic staff (refer Annexure 4). The purpose of the interviews was to draw out responses related to the research questions and concepts from the conceptual framework. Individual interviews were held with the principals of both campuses using the same semi-structured questions as were used for the academic personnel.

According to Tashakkori and Teddlie (2010) the advantages of interviews are that they are targeted to obtain data for the case study and the data can be reflected upon to make causal inferences. The disadvantages of interviews, however, are response bias, inaccuracies and the interviewees may give premeditated responses to the questions. The researcher listened and recorded the information using a voice recorder with the permission of the participants. If this had not been granted, then notes would have been taken, using the interviewee's own words (Lincoln, 1985).

4.10.3 Document Review

The advantages of documents are that they can be reviewed repeatedly, they have not been constructed specifically for the study and they are records that are already available in the settings. The disadvantages of documents are that they may be biased, difficult to obtain or incomplete (Yin, 2014). Document reviews are used to understand policies and systems, draw inferences from them, provide explanations/answers to research questions, and cross reference information gathered from the questionnaires and interviews which may have been different or similar to what is being done. (Yin, 2014).

Documents were requested from the principals of the two campuses and the administrative head office. Data obtained from multiple sources ensured validity, evidence and triangulation (Tashakkori and Teddlie, 2010).

Table 4: Summary of data collection methods and instruments

Participants	Quantitative data	Qualitative data
Student nurses	self-reporting mainly closed ended structured questionnaire	Focus group interviews using a semi structured interview guide
Senior academic personnel	-----	Focus group interviews using semi structured interview guide.
Principal of campus	-----	Individual interviews using semi-structured interview guide.
Document review	-----	Student learner information guide, student statistics; (student enrolment, examination results, completion of training, attrition, reasons for dropout) recruitment and selection policy.

4.11 DATA COLLECTION PROCEDURE

In accordance with the mixed methods approach, the collection of quantitative and qualitative data was planned and implemented simultaneously to answer related aspects of the same basic research questions, starting and ending at approximately the same time (Tashakkori and Teddlie, 2010).

Permission was obtained from the principals of both campuses to perform site visits, the purpose being to introduce myself to the campus management and students, familiarize myself with the surroundings and to observe the environment, the culture of the organization and the management style, thereby gaining their co-operation and trust. The purpose and significance of the research was explained during these visits and permission was obtained to have access to the participants for the quantitative and qualitative components of the study. The process regarding the days of distribution and collection of the questionnaire and the interviews were negotiated and arranged with the relevant principal, who made the students and academic staff available on the scheduled dates and times. Data collection took place over a period of approximately six to eight weeks in the two campuses, which are geographically about 500km apart from each other.

4.11.1 Quantitative aspect

A suitable time was arranged to meet with the students and the campus management assisted to source them on the days that were set aside for the visits, with students from the different levels being done on separate days. The students were invited to participate on a voluntary basis, and anonymity and confidentiality were assured. The significance of the study, the ethical aspects and the procedure were explained in depth, and any concerns that were raised were clarified. A participant information sheet was given to the students, which also explained the procedure in detail. The students were requested to sign the consent forms,

which were collected and kept separate from the questionnaires. Once the informed consent forms had been collected, the questionnaires were distributed to the participants. The researcher explained to them that the questionnaires would take approximately 60 minutes to complete. The questionnaires were collected on the same day. Students who were not available on the day of the researcher's visit were accommodated by placing their questionnaires in separate envelopes and leaving them with the class coordinators. Once filled in, these were dropped off in a secure box that had been left with the coordinator to be collected by the researcher on her next visit. Data collection entailed several visits to the campuses as it was not possible to get all the selected participants in one day due to their study schedules and off duties. A total of 190 questionnaires were distributed to students in the northern campus and another 160 questionnaires were distributed in the southern campus.

Contacting the students who had dropped out of the programme proved difficult. The researcher tried to contact them telephonically and if she did manage to reach them, she explained the purpose of the study and invited them to participate. However, it became impractical to conduct the survey telephonically as many did not keep their appointment for the telephone survey, the questionnaire was lengthy and using mobiles was very expensive. The researcher then posted questionnaires, together with a self-addressed return envelope, to the last known address of the ex-students. Twenty (20) questionnaires were posted to the target sample of the south campus and 35 to the target sample of the north campus. Messages were also left at their respective training institutions as some of these students frequented their ex-training places in the hope that they could get back into training. The posted questionnaire had a preamble stating that "completing this questionnaire means you are giving consent to participate in this study". They were not requested to sign an informed consent because it would have had to have been returned with the completed questionnaire, thus defeating the ethics principle of ensuring anonymity.

The response rate was very poor in both campuses. Many of the ex-students could not be traced through their mobiles or landline telephone details. Furthermore, the postal service is sometimes unreliable, especially in the remote rural areas. Another reason is that they could have moved on and changed their last contact details. In spite of their promises only a few, (4 from the north and 8 from the south) returned the questionnaires. The analysis process was therefore abandoned and was replaced with a complete document review of non-returning students (dropouts).

4.11.2 Qualitative aspect

According to Tashakkori and Teddlie (2010), focus group interviews are useful for exploring ideas as they allow for observation of how participants react to each other as well as probing. Focus groups allow for diverse views to be studied, which then generates an in-depth understanding of the problem. Furthermore, the views shared by the participants minimize researcher bias. The researcher tried to be neutral and approached the participants in a friendly non-threatening manner, using open-ended questions such as „how“ and “tell me” (Yin, 2014) Focus group interviews were held with students and academic staff of both campuses, as well as face to face interviews with the principals of each campus.

Focus group interviews with students

A week after the questionnaires had been filled in, the researcher held one focus group interview per campus with a small group of students. These took place in a quiet classroom, provided by the campus management. The procedure, purpose and significance of the study were explained to the groups and an informed consent was obtained from them. A participant information sheet was also provided. The students from both campuses participated eagerly and answered the questions appropriately. They were not shy to give their responses, enjoyed responding to the questions and came up with recommendations. The researcher recorded the

interviews, which took an hour and a half, with a short interval in between to provide some rest for the students.

Focus group interviews with academic staff

These interviews were done concurrently during the data collection process. Permission was obtained from the principals of both campuses to access the academic staff who had been targeted to participate in the study. An information sheet was given to each participant, together with a résumé of the study. Arrangements were made to meet with them and a time slot for an afternoon was given. On the day of the interviews, the researcher once again explained the procedure, purpose and significance of the study to them and explained that they had been selected to participate because of their seniority and because they were responsible for co-coordinating the various disciplines. Consent forms were signed and collected prior to commencing with the interview. The interviews lasted about an hour and a half as the questions and resulting discussion of this focus group covered many of the concepts from the conceptual framework. A short break was provided to give the participants an opportunity to relax to keep the attention span going

The participants responded enthusiastically with comprehensive information and recommendations making it evident that they were eager to improve the success rate of students. The interviews were captured using a digital voice recorder.

Face to face interviews with campus principals

Arrangements were made for interviews with the two principals. An information sheet was given to each of them as well as a résumé of the study prior to the interview and an informed consent was obtained from them. The interviews took place at their workplaces, the time and place having been arranged at their convenience. Interestingly, the principal of the northern

campus had been appointed a few months prior to the interview date, while the principal of the southern campus, who had many years of experience as head of the campus, was about to retire and the interview took place on her second to last day at work. These two experiences from a recently appointed principal and an experienced principal complemented data collected. The interviews were digitally recorded. The interview with the principal of the southern campus lasted about an hour and a half and the interview with the principal of the northern campus took about an hour.

4.11.3 Document review using student records

The student records of all ten campuses of the College of Nursing were reviewed to establish any overall trends in student dropout. The student records from the two campuses participating in the case study were reviewed again but separately this time. An electronic student data base is not available at the administrative head office of the college of nursing therefore the college archives hard copies of all student data in individual student files. The data kept in each student file included registration documents, examination results, date of commencement of programme, date of completion of programme, date of attrition or dropout, level of training when dropout occurred, reasons for dropout, matric scores, age and gender. The researcher was able to retrieve the required data for her objectives. The student records dated as far back as the year 2005, when the restructured college admitted the first cohort of student nurses (KZN College of Nursing, 2013b).

Using a checklist, (refer Annexure 5) the researcher reviewed student records between the enrolment years 1 July 2005 to 1 July 2012, and retrieved 856 records of students who had dropped out of the nursing programme. The records showed that 4123 students had enrolled at the college during this period. Taking into consideration the dropout and the enrolment figures for this period, the attrition rate was estimated to be about 20.76% as at 14 September

2012. The information from each individual record was categorised as follows: campus of study, intake date, age and gender, dropout date, level of study at which the students dropped out, and the reasons for dropout. The data was coded and entered into the computerised software package, IBM SPSS, Version 21, for analysis.

The learner information guide and rule book (KZN College of Nursing, 2013a) and the policy on selection criteria for the (KZN College of Nursing, 2010a) were also reviewed to corroborate findings from quantitative and qualitative data.

4.12 VALIDATING THE QUANTITATIVE DATA

It is necessary to validate the data to ensure the rigor and trustworthiness of the research process and the findings. In mixed methods research, researchers use two different sets of standards for assessing the quality of their data, which are reliability and validity (Tashakkori and Teddlie, 2010). Reliability confirms that the data consistently and accurately represents the constructs under examination, while validity verifies whether the data represents the constructs it was assumed to capture (Tashakkori and Teddlie, 2010).

4.12.1 Reliability

The reliability of a measure denotes the consistency obtained in the use of a particular instrument (Burns and Grove, 2010). Reliability plays an important role in the trustworthiness of the research study and findings. As a means of reliability, the questionnaire was piloted using a test-retest method. The questionnaire was tested on five student nurses from different levels of study in the four year comprehensive nursing programme from a non-participating campus on two occasions to test the consistency of responses. Comparison of the responses from the two sets of data showed that the responses remained consistent, thus demonstrating that the measuring instrument was reliable (Burns and Grove, 2010).

The researcher also measured the internal consistency of the instrument using Cronbach's Alpha scale. Reliability of an instrument can be expressed as a form of correlation coefficient, with a result of 1.00 indicating perfect reliability and 0.00 indicating no reliability (Burns and Grove, 2010). For a newly developed instrument, however, a reliability of 0.70 is considered consistent (Burns and Grove, 2010). The 33 items on the questionnaire that measured "reasons for poor academic progress" scored an Alpha co-efficient of 0.842; and the 22 items that measured the "satisfaction levels of students with regard to training" scored an Alpha co-efficient of 0.860. The remaining items on the questionnaire measured demographic variables and nursing knowledge.

The semi structured interview guide for students was also piloted using the same group of students who participated in the testing of the structured questionnaire. The semi structured interview guide designed for academic staff was also piloted using a small group of non-participating academic staff. The pilot study was done to ascertain that the questioning corresponded to the constructs from the conceptual framework and to clear any ambiguity and repetition. A pilot study is useful to refine the questionnaire and enhance reliability in academic rigor (Burns and Grove, 2010). Some minor adjustments were made to the wording of certain phrases in the interview guide.

4.12.2 Validity

Validity is a measure of the truth or accuracy of a claim (Grove et al., 2012). It refers to the extent to which an instrument measures what it is supposed to measure (Polit and Beck, 2008). There are four main types of validity: face validity, criterion-related validity, construct validity and content related validity (Polit and Beck, 2008). Construct and content validity were measured in this study. Construct validity determines whether the instrument actually measures the constructs in the framework of the study and the content validity ensures that

the major elements relevant to the constructs are included in the measuring instrument (Grove et al., 2012). This was ensured by checking items in the data collection tool against the study objectives and constructs in the conceptual framework. A content validity table was developed to illustrate this, as presented in Table 5 below. The data collection tool was also given to a team of experts within the research and nursing education faculty to be reviewed against the conceptual framework and the objectives of the study to determine the validity of the instrument.

Table 5: Content validity table for tool development

Research Objective	Constructs from Conceptual Model	Questions from Instrument	Interview guide for students	Interview guide for-academic personnel	Document Review
i).Explore trends in student dropout in the College of Nursing basic nursing education programme in terms of gender and age; level of study; subjects/discipline: general nursing, midwifery, psychiatric nursing science, community nursing science, anatomy and physiology & social sciences.	Student demographic Institutional engagement	Section A Q1-2; Q12 Section C Q18	Q1-academic integration	Q2-academic integration	Examination results and student statistics
ii).Explore factors contributing to dropout rates	Pre-Enrolment and Integration phase Institutional engagement	Section B Q13 - 17 Section C Q20 items (1-33)	Q1-academic integration Q2 - student involvement & engagement	Q1-Student enrolment Q2-academic integration Q3- student engagement Q4- student support	
iii). Explore the relationship between student dropout and demographic data in the campus of offering.	Student demographic				Document review student statistics

iv) Explore the relationship between students' study progress and demographic data in the campus of offering;	Student demographic	Section A Q1-8; 12			
v) Explore student satisfaction level in the programme.	Pre-enrolment and integration Institutional engagement	Section C Q 21 Items (1- 22)	Q1-academic integration Q2 student involvement and engagement Q3-student support Q4- social integration		
6. Describe measures in place to address dropout rates during : • pre-enrolment • integration and • engagement phases	Pre-enrolment and -integration phase Institutional engagement		Q1-academic integration Q2- student involvement and engagement Q3-student support Q4-social integration	Q1-student enrolment Q2-Academic integration Q3-student engagement Q4 student support	Learner information guide and rule book

4.13 VALIDATING THE QUALITATIVE DATA

Trustworthiness, also known as academic rigor, refers to the logical accuracy, scientific adequacy or trustworthiness of the research outcomes with respect to openness, scrupulous adherence to the philosophical perspective of the approach and thoroughness in collecting data (Grove et al., 2012). The concept of trustworthiness is used to make certain of the quality and value of the final results and conclusions reached in qualitative research (Lincoln,

1985). In qualitative methods, the intent is to understand the social reality in its natural settings. Lincoln (1985) suggests four techniques of trustworthiness that collectively indicate the quality of the data for qualitative inquiry. These are credibility, transferability, dependability and confirmability.

4.13.1 Credibility

Credibility refers to whether the data that is drawn from the participants is authentic and portrays what one is looking for (Lincoln, 1985). Although there are several means to increase the credibility of a study, the following aspects of credibility were applicable to this study; prolonged engagement, triangulation, thick description of the research process, discussion of data and categories with the supervisor and member checking (Tashakkori and Teddlie, 2010). This being a case study, the researcher spent an adequate amount of time in the field to build trust and learn the culture of the environment. She tested for misinformation from participants through a document review and compared the principals' responses with those of the senior academic staff. The researcher visited the sites a number of times during the course of the study and was able to make observations that were of relevance to the study and were therefore included in the data. She noted, for example, that the northern campus was under renovation and the students' library was dysfunctional.

4.13.2 Transferability

Transferability is the degree to which the findings of an inquiry can apply to another situation. As generalization depends on the context of the study, it cannot apply to case studies, except within the boundaries of the defined case (Yin, 2014). However, a thick description may be provided to assist someone interested in contemplating transferability. Thick description entails giving a detailed or dense description of the study context, settings, procedures and findings to enhance transferability. The findings of this study can be

generalized to the ten campuses within the College of Nursing since the systems, policies and processes are all the same across all campuses offering this qualification.

4.13.3 Dependability

Techniques used to measure credibility also measure dependability as there can be no credibility without dependability (Lincoln, 1985). Dependability involves an assessment of the stability and quality of data collected through audit trails and checks. In this study, dependability was measured through peer review, rich, thick descriptions of research process and coding of procedures, all of which were replicated in the two embedded units of analysis within a single case. Themes and categories that emerged across the units of analysis also served as a measure of dependability.

4.13.4 Confirmability

Confirmability is a measure of how well the study findings are supported by the data collected. It refers to the objectivity of the research process and findings, ensuring that they are free from the researcher's biases and that the conclusions reflect the conditions of the inquiry and not the investigator (Lincoln, 1985). In this study, the interpretations and findings were continuously verified through peer reviews, use of interviewees' own words, matching transcripts with recordings, an audit trail and document entries.

4.13.5 Triangulation

Using a mixed methods approach results in methods triangulation. In this case study, triangulation or cross checking of information and conclusions was achieved through the use of multiple sources of data collection, such as the use of questionnaires, interviews and document reviews. Furthermore, the use of two embedded units of analysis enabled site analysis and then cross-site analysis, which facilitated triangulation and corroboration of

conclusions. Credibility was enhanced through peer debriefing, which involves sharing data with peers, colleagues and experts in the field and taking their feedback into account. The research supervisor checked the themes and patterns that emerged from the data. Member checks, however, is the most important technique to validate accuracy of data collected. The themes that were extracted from the study were shared with participants to validate the data collected (Lincoln, 1985).

4.14 DATA ANALYSIS

According to Miles and Huberman (1994), in collective case studies, it is helpful to analyze data relating to the individual component cases first, before making comparisons across cases. Attention needs to be paid to variations within each case and, where relevant, the relationship between different causes, effects and outcomes.

4.14.1 Qualitative data analysis

The Cyclical or Interactive Model of Qualitative Data Analysis by Miles and Huberman (1994) was used to analyze the data. Miles and Huberman's model has three major phases of data analysis. These include data reduction, data display, and conclusion drawing and verification.

According to these authors, processes within the data reduction phase involve selecting, focusing, simplifying, abstracting and transforming the data, which appears in the written field notes and interview transcripts. A number of processes were employed in this study to achieve data reduction, which included contact summary sheets, marginal remarks, coding of interview transcripts and the development of theoretical memos. Contact summary sheets assisted the researcher to reflect upon the main concepts, themes, issues or questions addressed during each participant contact. The reflection process, according to Miles and

Huberman (1994), provides a focus for subsequent data collection episodes and reduces the potential for data overload.

Once qualitative data from the interviews had been transcribed, the researcher employed marginal remarks to maintain mindfulness during the coding of data. Miles and Huberman (1994) recommend using marginal remarks on the transcribed data, arguing that it is an important stage in the initial analysis of data as marginal remarks highlight interpretations, possible leads and possible relationships, and guide the researcher towards fresh issues to consider in future data gathering encounters. The researcher followed this process and codes generated from marginal remarks were used to dissect and add meaning to transcribed data. It also assisted in establishing relationships within the emerging codes. The researcher also compiled memos throughout the coding of data as recommended by Miles and Huberman (1994), who maintain that memos are one of the most important and powerful sense-making procedures available to the qualitative researcher as they help extract the researchers' momentary ideas about the data. Memos helped in highlighting ideas about the codes generated and the relationship between the codes that emerged during the coding process to encourage conceptual collaboration. Data displays (formats) were used to "*organize, critique and assemble data which permit the drawing and verification of conclusions*" as stated in Miles and Huberman (1994).

In this study, each transcript was analyzed separately. Codes or concepts generated were indexed and displayed in a template known as a data matrix. The completed template, which displayed emerging concepts per transcript allowed the researcher to map or note patterns and themes within the data (mapping process). The patterns and themes that emerged were taken back to the participants for member checking and verification. The research supervisor was also involved in checking the generated templates. Once all the patterns and themes had been

identified, the researcher, with the help of the research supervisor, engaged in the process of interpreting the findings and then documenting the interpretations in the form of a report.

4.14.2 Quantitative data analysis

The aim of data analysis is to transform information into an answer to the original research question (Polit and Beck, 2008). Summarised data was presented using frequency tables, bar graphs and histograms. Data was captured using a computer statistical package which is endorsed by the university, IBM SPSS Package, Version 21. Descriptive analysis entailed frequency tabulations, cross-tabulations, clustered bar charts for categorical variables, while ordinal variables were used to summarize data by group. Non-parametric statistics were used to examine differences in data obtained from the two campuses. Likert scale ordinal variables were compared between the two campuses using Mann-Whitney tests and Kruskal Wallis test. A chi-square value obtained at a P value less or equal to 0.05 was considered to denote a significant difference between variables under investigation.

4.15 DATA MANAGEMENT

All data (audio-recordings, transcripts and raw data) was strictly managed by the researcher to ensure that no participants' names were revealed. The researcher used an access code for her computer to prevent others from inadvertently accessing any electronic information. Tape recordings and written notes were restricted to the researcher, the research supervisor and persons who dealt with data and were kept in a locked cupboard with the key only accessible to the researcher. Document analysis did not reveal names of institutions or from where the documents had been obtained. Instead a coding system was used to differentiate documents from the two sites (Polit and Beck, 2008). Identification codes were assigned to the questionnaires to denote the different categories of students and also to each site where data

was collected. Fictitious names were used when reporting any specific qualitative data from interviews. Recordings and transcripts will be destroyed after five years.

4.16 ETHICAL CONSIDERATIONS

Ethical considerations in research are based on the ethical principles of respect for people, beneficence and justice, and are put in place to ensure respect for the participants, to protect them from harm and to ensure fairness in the process of the research study according to the Belmont report of 1979 (National Institutes of Health, 1979). This study subscribed to the ethical standards described by Emanuel, Wendler, Killen and Grady (2004), who state that exploitation of participants must not occur and that community participation, social value, scientific validity, fair selection of participants, a positive risk-benefit ratio, independent reviews, informed consent and respect for participants should be taken into account. The following ethical principles have been observed in this study:

Independent ethics reviews

While the Constitution of South Africa Act no. 108 of 1996 is central to any ethical considerations in protecting the human rights of the participants, independent ethics reviews were obtained from the Research Ethics Committee of the University of KwaZulu-Natal, the KZN Provincial Health Department Ethics Board and the KwaZulu-Natal College of Nursing.

Informed consent

Informed consent was obtained in writing from each participant who volunteered to participate in the study. The identity of participants and the organizations where they learn as students and work as lecturers were protected through the use of codes.

On-going respect for participants and study communities

Participants of the research were ensured that they could withdraw from the study at any stage without penalty (Hammersley and Atkinson, 2007). The participants were provided with information which was elicited in the course of the study. The College of Nursing will receive a copy of the research report, as will the School of Nursing and Public Health at the University of KwaZulu-Natal, where the researcher pursued her studies. The research will be published in an accredited professional journal on completion and the participants and organizations who were involved in the study have been informed that such publications will occur (Hammersley and Atkinson, 2007). Articles will be written, based on the findings of the research so as to further inform nursing education practice.

Social value

The research will have an indirect input on promoting throughput of student nurses, thus improving the supply of qualified nurses for service delivery needs in the health care industry as it illuminates challenges leading to students dropping out of the programme and provides some solutions that may be used to address the problem of interest in this study.

Risk-benefit ratio

No potential risks were foreseen in respect of the study subjects. The participants would incur no costs and their names and identifying data will not be disclosed. The researcher did not need to fund meetings with participants and the study was conducted within the campus settings where the students and the lecturers are easily available. Therefore, the benefits to the policy makers for nurse training and the community outweigh the risk to the individual participants

4.17 DISSEMINATION OF FINDINGS

The writing of the report is the central part of the research process. This report will be presented in a form of a thesis. Findings will be shared with other nurse educators in conferences and through publications. One of the copies will be provided to the College of Nursing for their use.

4.18 SUMMARY OF CHAPTER

This chapter described in detail the methodology used for the quantitative and qualitative aspects of the research process in this case study. It described the research approach, research design, the case study protocol, the units of analysis, research sites used, the population and the sampling methods, data collection methods and instruments used. It also described the process of validating data and data analysis, ethical considerations and data management.

The next chapter outlines the data analysis process for the quantitative and the qualitative aspects as in concurrent mixed methods approach.

CHAPTER FIVE

DATA ANALYSIS: PRESENTATION AND DISCUSSION OF FINDINGS

5.1 INTRODUCTION

This study set out to explore attrition of student nurses from a four year nurse training programme at a selected nursing college in KwaZulu-Natal. As discussed in the previous chapter, a case study approach was employed and two units of analysis were used for this study, namely the northern and southern campuses of the nursing college. Both quantitative and qualitative methods were used in the process of data collection. To re-iterate, data for this study was collected from ex-students, current students and academic staff to obtain a holistic view of the subject of attrition. For the quantitative aspects, data was collected about students that dropped out from the college of nursing through a process of document review and a structured questionnaire for current students and for dropouts from the 2 campuses which served as the units of analysis. For the qualitative aspects, data was collected from academic staff and current students through focus group interviews and from the principals through face to face interviews. The throughput rate of students in the college of nursing was obtained through a process of document analysis.

This chapter presents the research findings aligned to the study objectives, which were to explore: (i) trends in student dropout in the basic nursing education programme; (ii) the relationship between student dropout and demographic data; (iii) the relationship between students' study progress and demographic data; (iv) factors contributing to dropout rates; (v) level of satisfaction in the programme; and (vi) to describe measures in place to address dropout rates.

5.2 SAMPLE REALISATION

A total of 325 participants took part in this study shown in Table 6 below. Non -returning students are not included because their data was managed differently. Data was also obtained from the records of a total of 856 students who had dropped out from the college of nursing.

5.2.1 Quantitative aspect

The sample expectation for current students in the programme was 350 students from both campuses (190 students from the northern campus and 160 students from the southern campus). A total of 350 questionnaires were distributed, 190 to current students in the northern campus and 160 to students in the southern campus. The total sample realised was 294 students. A response rate of 85% (n=161) was obtained in the northern campus and a response rate of 83% (n=133) in the southern campus. Polit and Beck (2008) attest that a response rate of greater than 65% is sufficient. These responses were used for the analysis of the quantitative part of the study.

5.2.2 Qualitative Aspect

Eighteen (18) students participated in focus group interviews; with nine (9) from each campus. Each focus group comprised of two students from each level of study of the four year programme and the leader of the student body. Ten (10) heads of disciplines; with five from each campus and one Deputy Principal from the northern campus participated in focus group interviews. The two principals from the northern and southern campuses participated in individual interviews.

Table 6: Sample Realisation

QUANTITATIVE ASPECT						
	Northern Campus	Response Rate	Southern Campus	Response Rate	Total	Response Rate
Current Students	161/190	85%	133/160	83%	294/350	84%
QUALITATIVE ASPECT						
	Northern Campus		Southern Campus		Total	
	Total No of Participants		Total No of Participants		Total No (Both Campuses)	
Student Nurses (FG)	9		9		18	
Academic Staff (FG)	5 Heads of Disciplines		5 Heads of Disciplines		10	
	1 Deputy Principal		-		1	
Principals (Individual Interviews)	1		1		2	
TOTAL	16		15		31	
GRAND TOTAL	177		148		325	

5.2.3 Non-returning students (terminated students)

The sample expectation for students who had dropped out of the programme from both the northern and southern campuses was 55 (35 students from the northern campus and 20 students from the southern campus). Therefore a total of 35 questionnaires were mailed to ex-students from the northern campus and 20 to ex-students from the southern campus. However, the total sample realised was only 22% (n=12). A response rate of 11% (n=4) was obtained from the northern campus and a response rate of 40% (n=8) from the southern campus. Burns and Grove (2005) attest that a response rate of less than 50% is questionable.

The researcher attempted to increase the return rate through telephone contact and leaving messages at the campuses where the students had been learning, but these proved unsuccessful. Therefore, because of the low response rate, the data was not included in the statistical analysis of the quantitative part of the study. These results were never intended to be included in the analysis of current students, as the questionnaires were not identical, which would have confounded the statistical analysis. A complete document review of all students who had been terminated from the programme compensated for the lack of data from non-returning-students. Therefore, the quantitative data analysis comprised of results from two sources; that is results from document analysis and secondly from the structured questionnaires. Document analysis aimed at measuring the magnitude of the problem of “student attrition” in the whole College of Nursing with regard to the age, gender and level of study at which students dropped out and the reasons for dropout. This was followed by analysing the relationship between student dropout and demographic data in the two campuses of offering.

The structured questionnaire administered to the students enrolled in the nursing programme during the period 2009 to 2012 measured constructs from the conceptual framework in line with the study objectives.

The findings of this mixed-method study are presented in two parts. Part one presents findings from the quantitative data, while part two presents findings from the qualitative data. Quantitative and qualitative results that support each other and those that differed are also presented to triangulate the findings. Where applicable, the results have been presented visually in a form of figures, tables and graphs. Only the significant findings are reported.

5.3 PART ONE: QUANTITATIVE DATA ANALYSIS

5.3.1 Document analysis

5.3.1.1 Trends in dropout from the College of Nursing (n=856)

Data was obtained through document analysis. Document analysis provided a picture of dropout in the whole college of nursing, which was important in order to understand the magnitude of the problem. In addition to triangulating sources of data, this process added value to the study by getting data about students who had dropped out of the programme (terminated students) as the response rate from this group of participants was very poor. The researcher reviewed student records between the enrolment years of 2005 and 2012 with the sole purpose of holistically exploring trends in student attrition in regard to demographic factors such as students' age, gender and level of study at which dropout had occurred and disciplines/courses in which they had been engaged when they had terminated their studies at the college of nursing. A total of 856 records of students who had dropped out were retrieved and analysed.

Trends in terms of age (n=856)

Students' ages at the time of enrolment into the programme were reviewed and analysed. They were divided into eight categories, namely 19 years and younger; 20-24; 25-29; 30-34; 35-39; 40-44; 45-49; and 50 years and older. The findings presented in Figure 5 below indicate that 4.4% (n=38) of students that dropped out were 19 years and younger, 41.9% (n=359), which made up the highest proportion, were aged between 20-24; 23.7% (n=203) were between 25-29; 15.1% (n=129) were between 30-34; 8.2% (n=70) were between 35-39; 3.6% (n=31) were between 40-44; 2.6% (n=22) were between 45-49; and 0.5% (n=4), which was the smallest group, were 50 years and older.

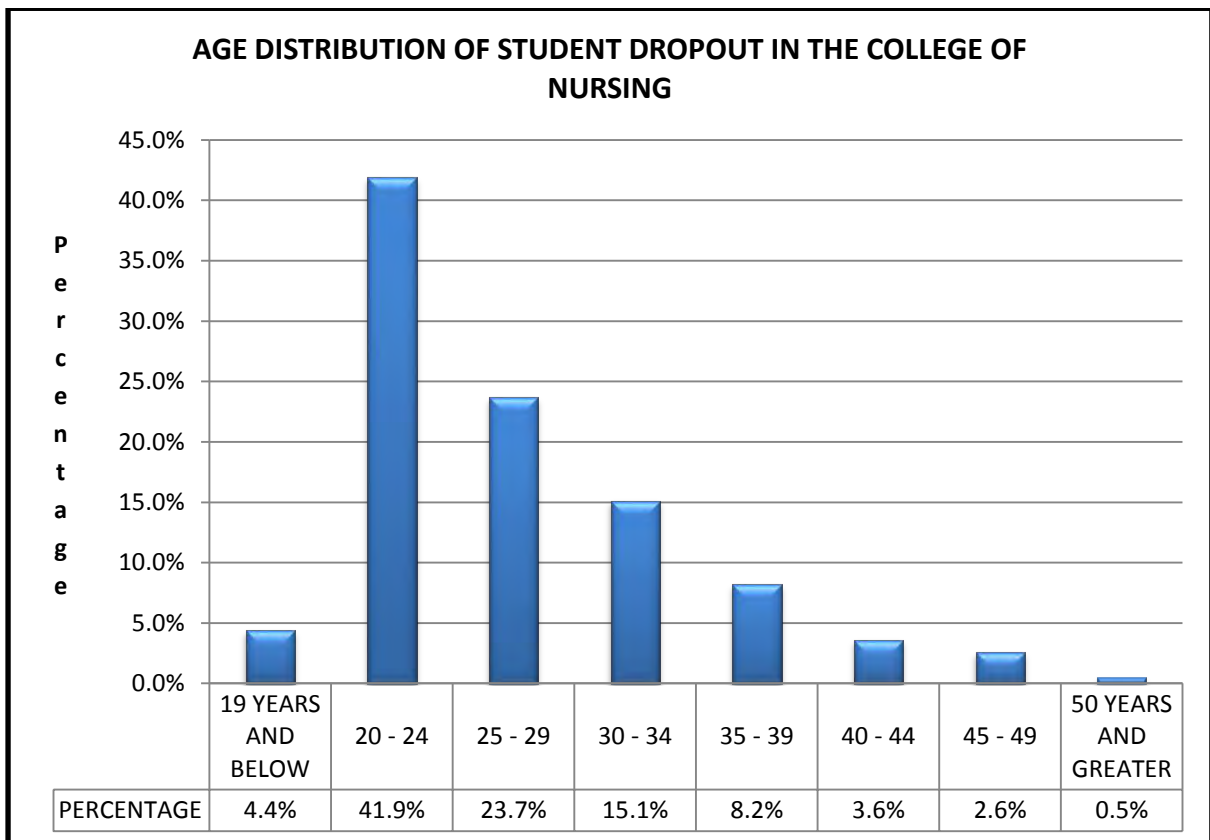


Figure 5: Age distribution of student dropout in the college of nursing (n=856)

Trends in terms of gender (n=856)

In regards to gender, the results illustrated in Figure 6 below show that the majority of student dropouts were females 68.3%, (n=585), with only 31.7% (n=271) being males. This is in line with the current picture that the nursing profession is female dominated.

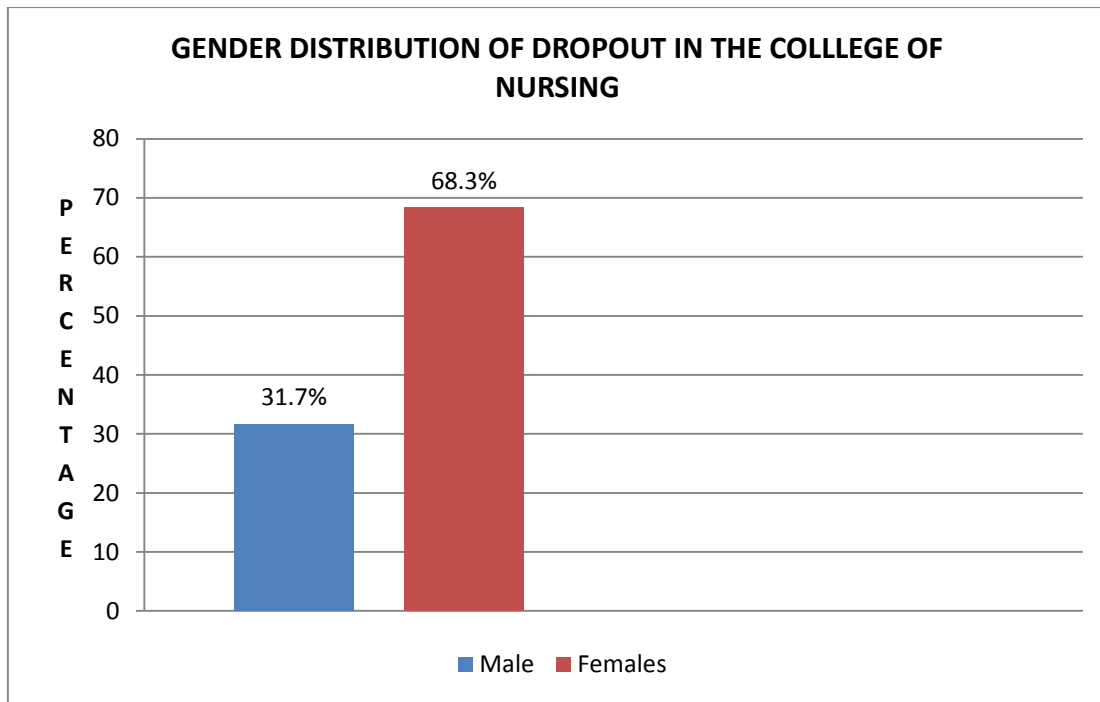


Figure 6: Gender distribution of student dropout in the College of Nursing (n=856)

Trends according to the level of study (n=856)

Student records were analysed to ascertain during which of the four years of the programme the students had dropped out. The findings depicted in Figure 7 indicate that the majority of student dropout occurred in the 1st year of study with 80.6% (n=690) of students dropping out of the program. Only 6.4% (n=55) dropped out in the 2nd year; 8.6% (n=74) in the 3rd year; and 4.3% (n=37) in the 4th year. This is in line with the national picture according to the Council for Higher Education where the dropout rate at first year was 34% in the year 2006 and 40% dropped out by the end of regulation time (Council of Higher Education, 2013).

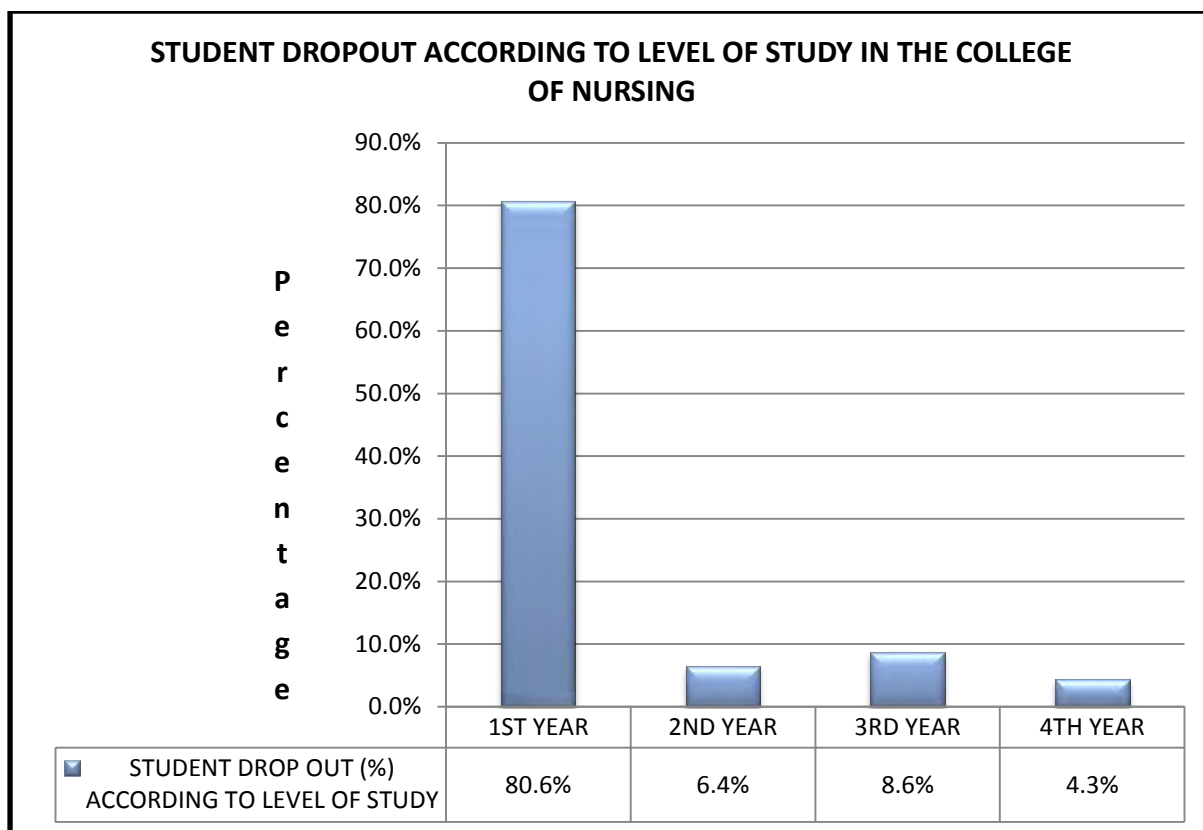


Figure 7: Student dropout according to level of study in the College of Nursing (n=856).

Trends in reasons for dropout (n=856)

Each student’s record was reviewed to establish the reason for dropout. From the reviewed documents it emerged that of the 856 students who had dropped out, 68% (n=578) had dropped out due to academic reasons and 32% (n=278) for other reasons. The two groups are presented separately in the following two figures, the first (figure 8) according to the nine disciplines/courses offered by the selected college of nursing, namely Anatomy and Physiology; Fundamental Nursing Science; General Nursing Science; Community Nursing Science; Social Science; Ethos and Professional Practice; Midwifery; Psychiatric Nursing Science; and Clinical Nursing Science, and the second (figure 9) according to other factors which were also explored and analysed in order to understand student dropout.

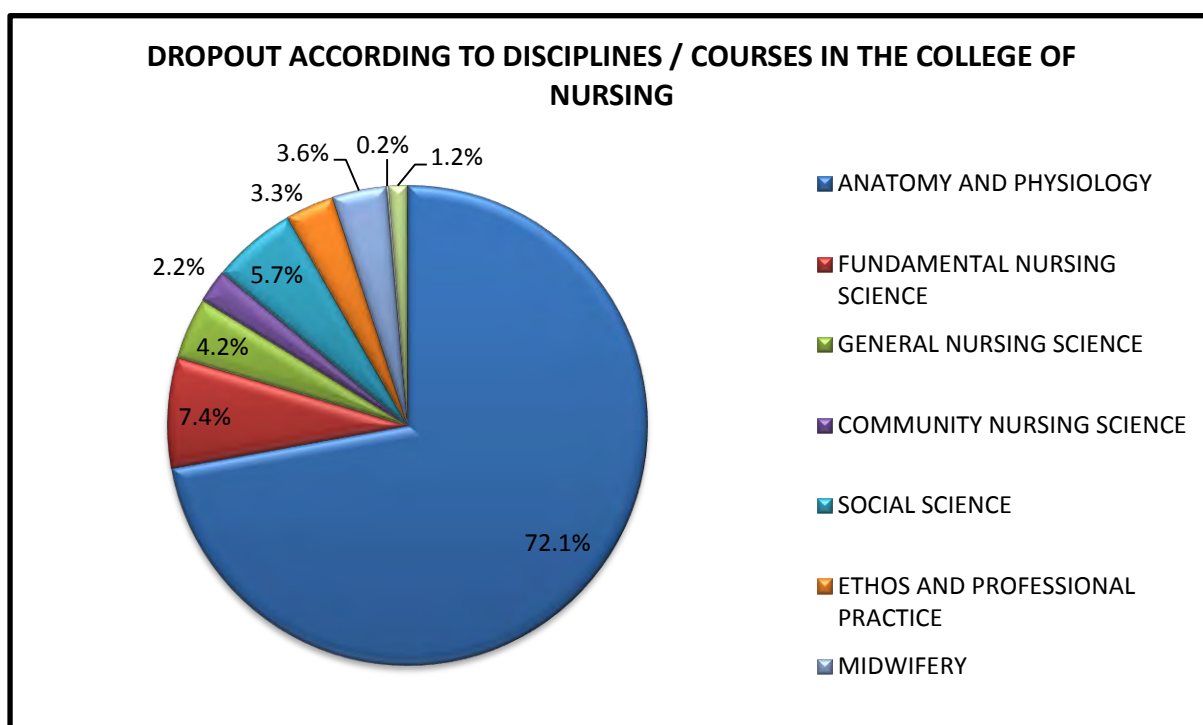


Figure 8: Dropout according to disciplines/courses in the college of nursing (n= 578/856)

The findings, as shown in Figure 8 above, indicate that the majority of students 72.1% (n=417) dropped out while studying Anatomy and Physiology; 7.4% (n=43) while studying Fundamental Nursing Science; 4.2% (n=24) studying General Nursing Science; 2.2% (n=13) studying Community Nursing Science; 5.7% (n=33) studying Social Science; 3.3% (n=19) studying Ethos and Professional Practice; 3.6% (n=21) studying Midwifery; 1.2% (n=7) studying Clinical Nursing Science; and the smallest percentage of students dropping out 0.2%, (n=1) during Psychiatric Nursing Science.

Anatomy and Physiology is traditionally regarded as one of the most difficult subjects and this was demonstrated throughout the period under review. It is also a first year subject, which could be one of the reasons accounting for the high failure rate in the first year of the programme. This was corroborated by quantitative data where participants highlighted Anatomy and Physiology as the major contributor to students dropping out.

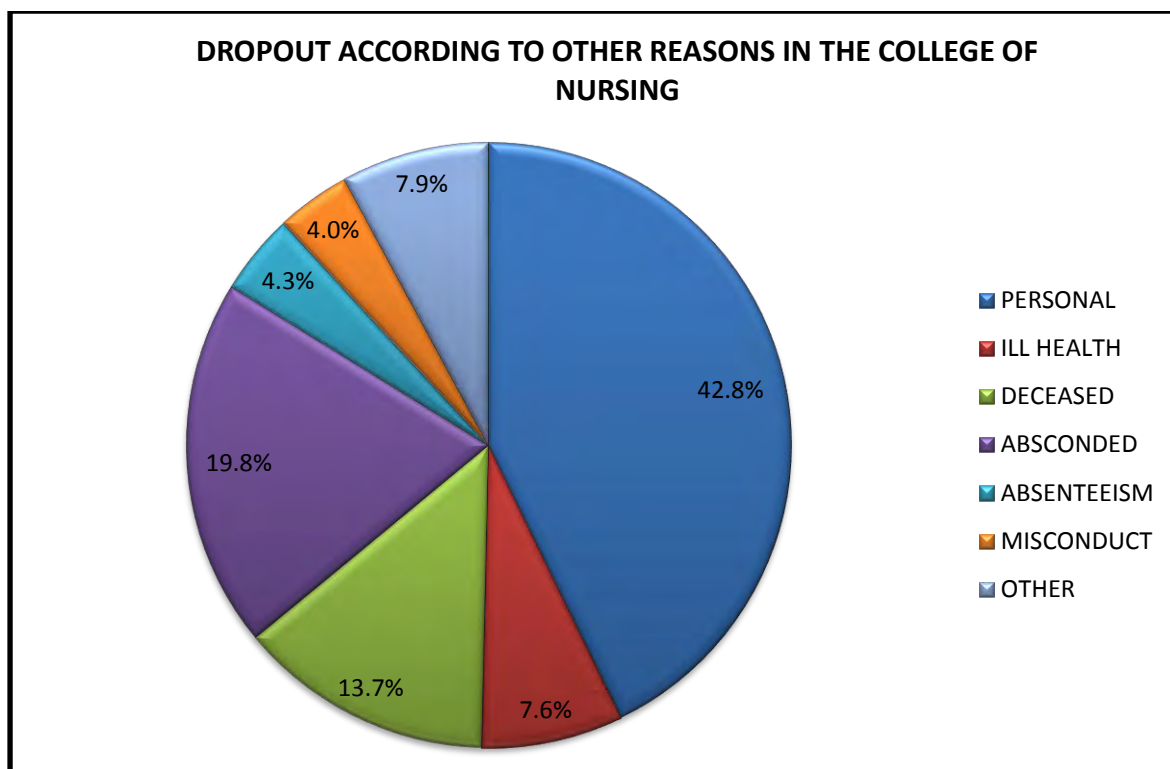


Figure 9: Dropout due to other reasons in the college of nursing (n= 278/856)

The reviewed documents also showed various other factors why students had dropped out of the nursing programme. The findings in (Figure 9) above show that 42.8% (n=119) had dropped out due to personal reasons; 7.6% (n=21) due to ill health; 13.7% (n=38) were deceased; 19.8% (n=55) absconded; 4.3% (n=12) due to absenteeism; 4.0% (n=11) misconduct; and 7.9% (n=22) due to other reasons which were not specified.

In addition student participant responses from qualitative data for poor progress or dropout included having difficulty with new concepts and terminology they have to cope with early in the training period; too short a time in which to assimilate information; difficulty in understanding the course material; and not having taken Biology at school. Further findings from the qualitative data collected from both students and academic staff, which are presented in part two of this chapter, support the negative effect ill-health has on students"

study progress. Breier et al. (2009b) cited nurses having fear and distress due to the possibility of contracting TB or HIV/AIDS in the workplace.

5.3.1.2 Trends in student dropout in the campus of offering (n=305)

To establish the relationship between student dropout and campus of offering (units of analysis) in regard to *demographic factors*, the researcher analysed the documents of students who had been studying in the selected campuses (northern and southern campuses) and had left the programme during the period 2005-2012. A total of 113 student records were retrieved for northern campus and a total of 192 were retrieved for the southern campus. Therefore a combined total of 305 student records were analysed.

Age and dropout in the northern and southern campuses (n=305)

Students' ages at the time of enrolment into the programme were analysed. They were divided into eight categories, namely 19 years and younger, 20-24; 25-29; 30-34; 35-39; 40-44; 45-49; and 50 years and older, as presented in Figure 10 below. In the northern campus, the findings indicate that the majority of students 44.2 % (n=50) that dropped out were aged between 20-24; followed by 20.3% (n=23) in the age range of 25-29 years. The mean age was 25.7 years; the median age 24 and the mode 22. In the southern campus the findings indicate that 45.3% (n=87) of students that dropped out were aged between 20-24 which was the majority of students; followed by 27% (n=52) in the age range of 25-29 years. The mean age was 26.6 years; median 25 and a mode of 21.

In comparison between the two campuses the age variations are similar, majority in both campuses were between the age group of 20-24 years on commencement of training with a mean age between 25 and 27.

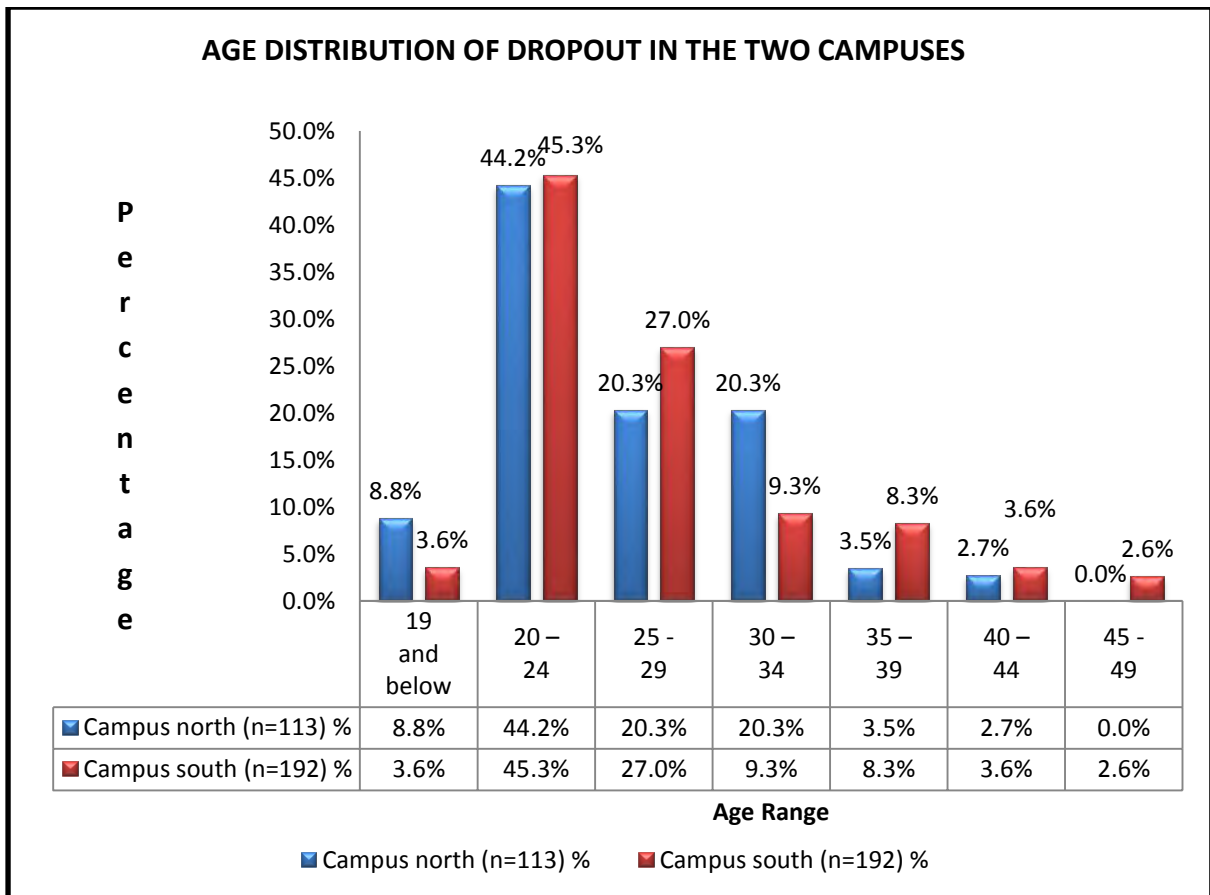


Figure 10: Age distribution of dropout in the northern and southern campuses (n=305)

Gender and dropout in the northern and southern campuses (n=305)

In regards to gender, the results illustrated in Figure 11 below, show that the majority of student dropouts in both campuses were female, with 52.2 %, (n=59) in the northern campus being female and 47.8% (n=54) being male and 67.2% (n=129) in the southern campus being female and 32.8% (n=63) being male.

This is in line with the current picture that the nursing profession is female dominated.

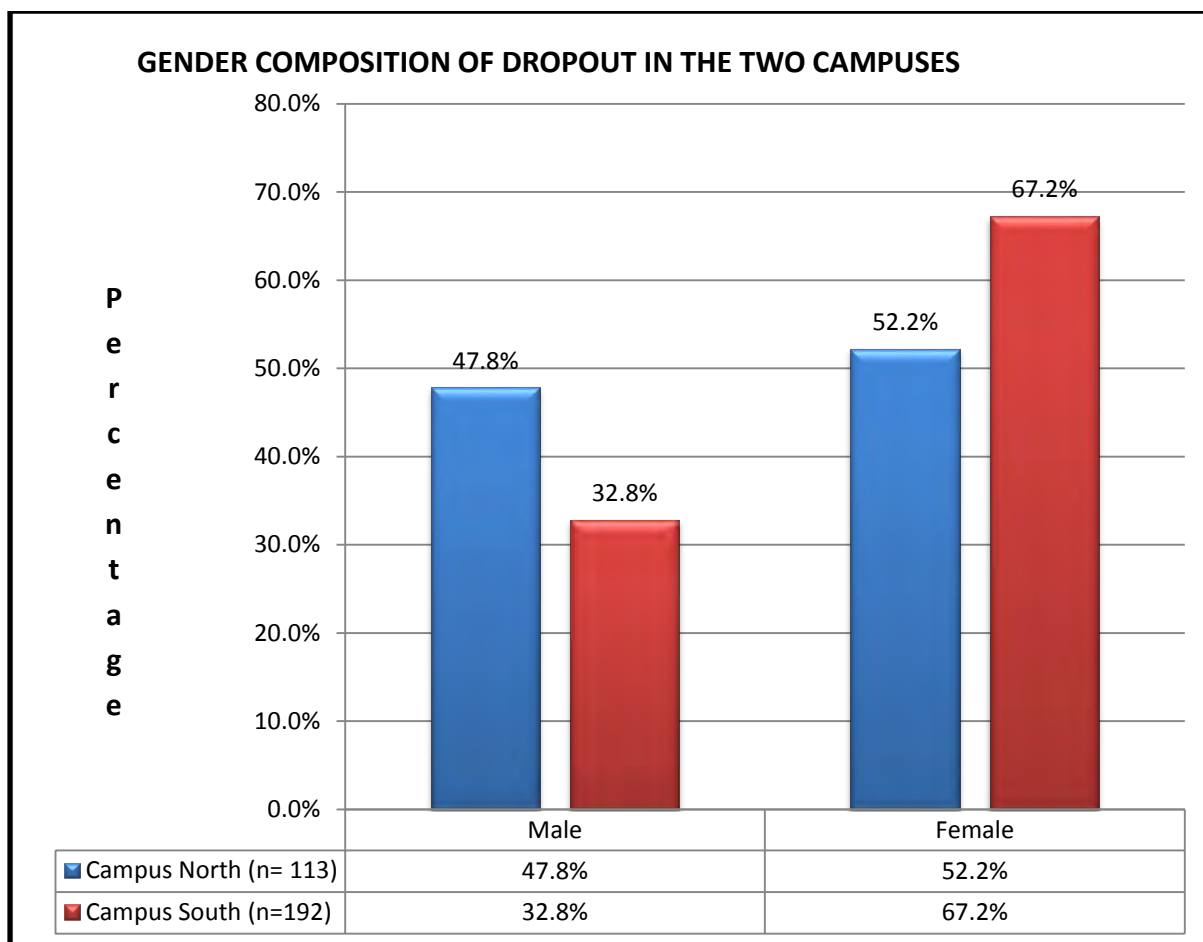


Figure 11: Gender and dropout in the northern and southern campuses (n=305)

Level of study and dropout in the northern and southern campuses (n=305)

Student records were analysed to ascertain during which year of the four year programme the students had dropped out. The findings depicted in Figure 12 below indicate that the majority of students in the northern campus 77%, (n=87) dropped out in the first year of study, followed by the third year 15%, (n=17); then the second year 7.0%, (n=8) and lastly the fourth year with 0.8% (n=1) dropping out of the programme. In the southern campus, the majority of student dropout also occurred in the first year of study 73.4 %, (n=141); followed by fourth year 12.5%, (n=24); then the third year 9.4 %, (n=18): and lastly the second year, with 4.7% (n=09) dropping out of the programme. The biggest dropout occurring in the first year in both campuses is in line with the dropout pattern in the college of nursing. It is also in line with the national picture, where the dropout rate at first year was 34% in the year 2006

(Council of Higher Education, 2013). In the northern campus, the second largest dropout occurred in the third year whereas in the southern campus it was in the fourth year.

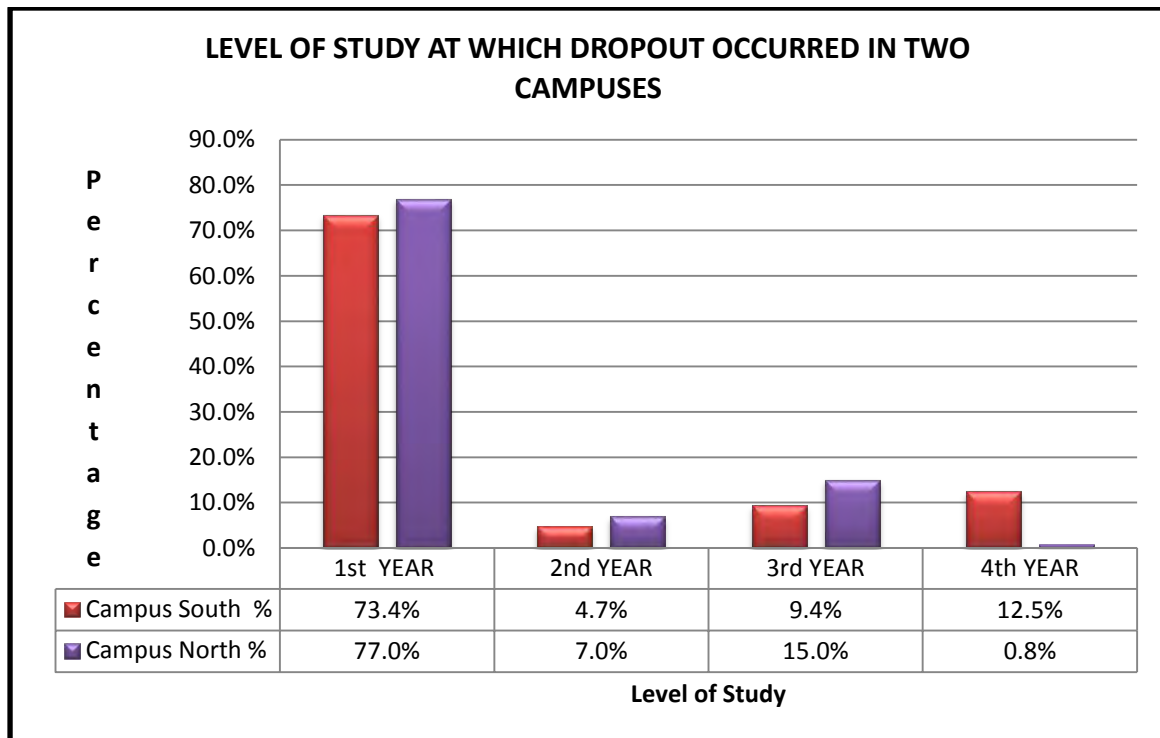


Figure 12: Level of study at which dropout occurred in the northern and southern campuses (n=305)

Reasons for dropout in the southern campus (n=192)

The records of each student who had left the programme were reviewed to establish the reasons for dropout. From the reviewed documents it emerged that of the 192 students that dropped out in the southern campus, 64% (n=123) had dropped due to *academic reasons* (Figure 13) and 36% (n=69) for *other reasons* (Figure 14). The two groups will be presented separately, the first according to the nine disciplines/courses of the nursing programme, namely Anatomy and Physiology; Fundamental Nursing Science; General Nursing Science; Community Nursing Science; Social Science; Ethos and Professional Practice; Midwifery; Psychiatric Nursing Science; Clinical Nursing Science, and the second according to other factors which were also explored and analysed in order to understand student dropout.

Reporting only the significant findings, in Figure 13 below it became evident that the majority of students in the southern campus 66.6%, (n=82) dropped out while studying Anatomy and Physiology followed by 11.4% (n=14) for Midwifery, 8.1 % (n=10) for Fundamental Nursing Science and 8.1% (n=10) for Social Science.

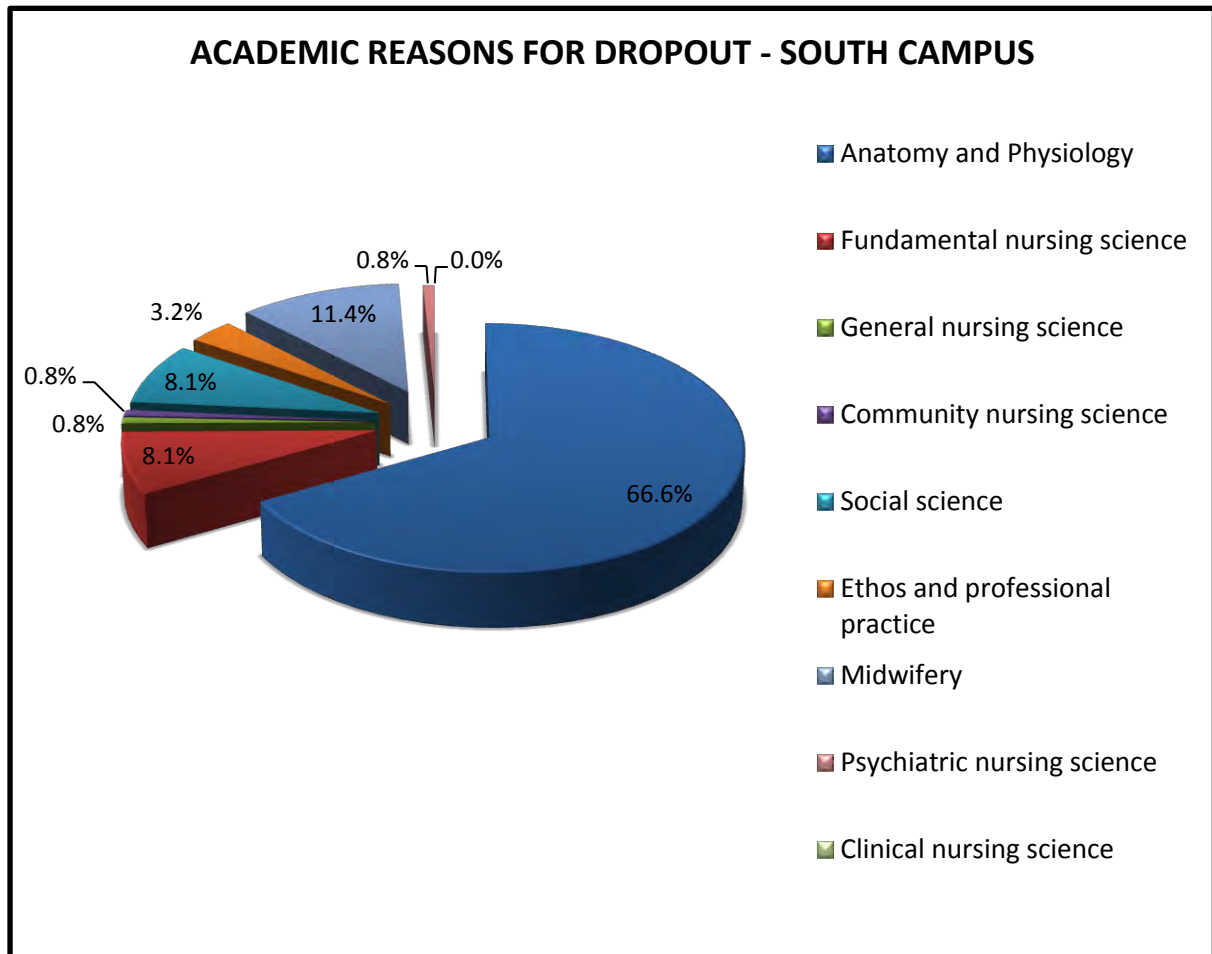


Figure 13: Academic reasons for dropout in the southern campus (n= 123/ 192)

The reviewed documents in Figure 14 below also showed various other factors why students had dropped out of the nursing programme. The most frequent reasons cited in the southern campus were personal factors 46.3 % (n=32), followed by abscondment 26% (n=18).

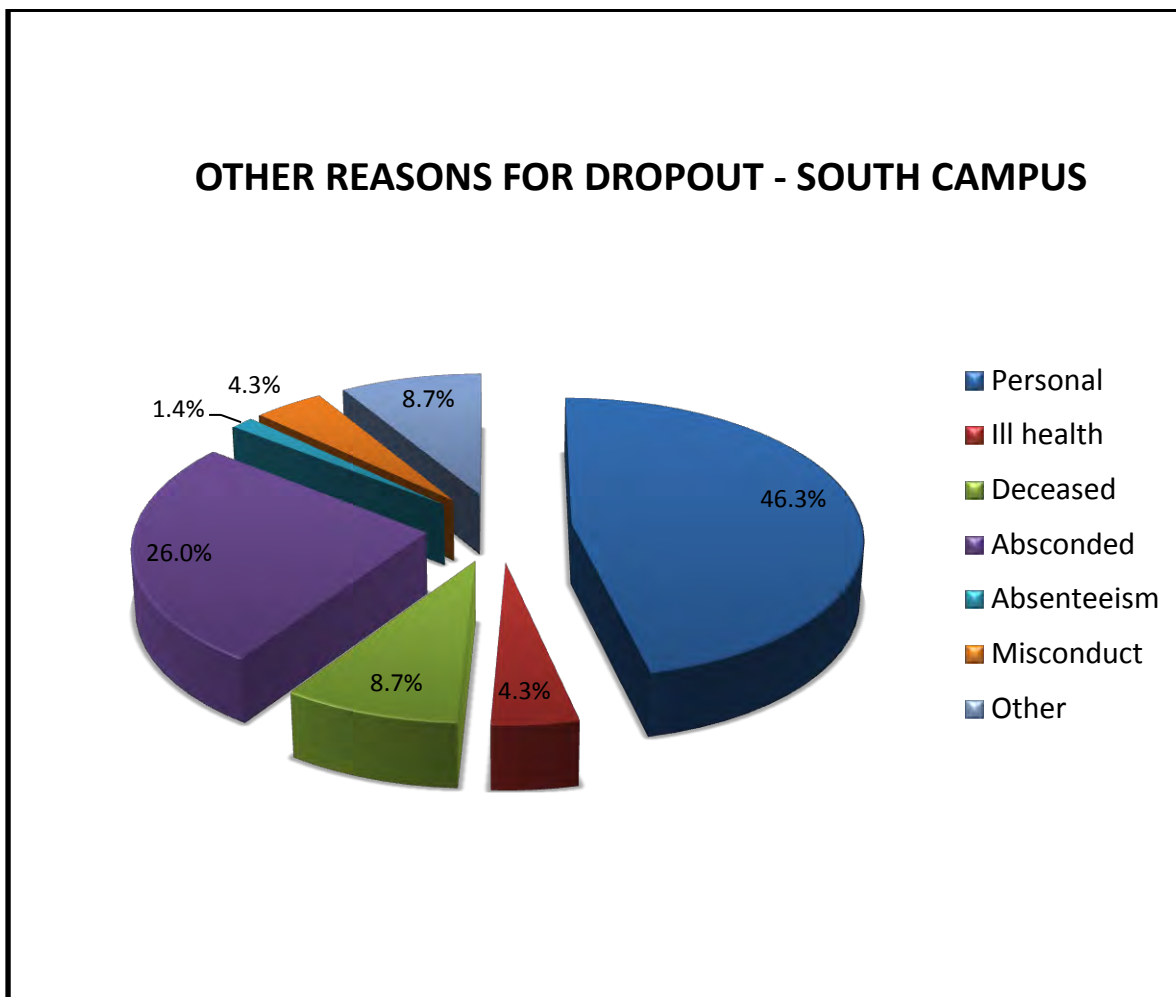


Figure 14: Other reasons for dropout in the southern campus (n= 69/123)

Reasons for dropout in the northern campus (n=113)

Of the 113 students who dropped out in the northern campus, 61% (n=69) dropped out for *academic reasons* (Figure 15) and 39% (n=44) for *other reasons* (Figure 16). The two groups will be presented separately in the following two figures, the first according to the nine disciplines/courses of nursing, namely Anatomy and Physiology; Fundamental Nursing Science; General Nursing Science; Community Nursing Science; Social Science; Ethos and Professional Practice; Midwifery; Psychiatric Nursing Science; and Clinical Nursing Science,

and the second according to other factors which were also explored and analysed in order to understand student drop out.

In the northern campus as well in Figure 15 below, the largest group of students 66.6% (n=46) dropped out while studying Anatomy and Physiology, followed by 14.5% (n=10) doing Fundamental Nursing Science, and 7.2 % (n=5) doing General Nursing Science.

Findings showed that Anatomy and Physiology was the subject that was most commonly failed in both campuses which resulted in dropout. This also emerged in the document review analysis and was also corroborated by quantitative data from the interviews where participants highlighted Anatomy and Physiology as the major contributor to student dropout, followed by Midwifery.

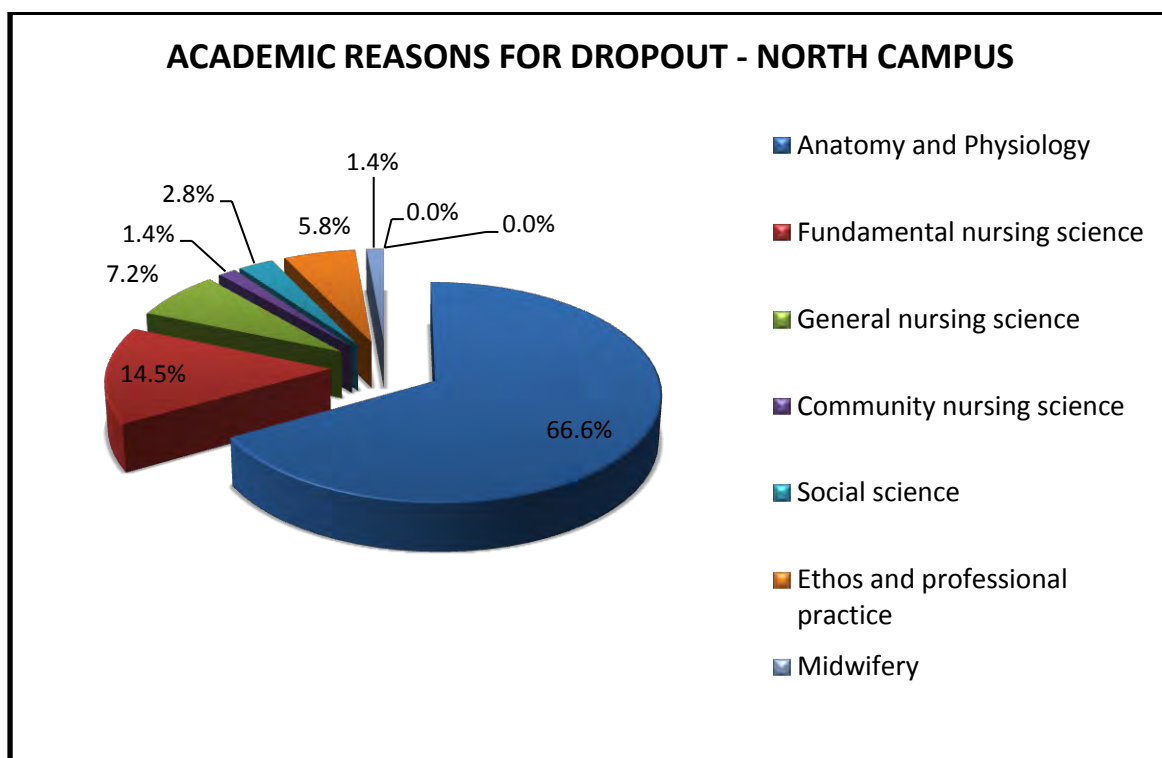


Figure 15: Academic reasons for dropout in the northern campus (n=69/113)

The reviewed documents in Figure 16 below also showed various other factors why students had dropped out of the nursing programme and, in keeping with the southern campus, the

most frequent reasons cited in the northern campus were personal factors 36.4% (n=16), death 22.7% (n=10) and abscondment 20.4% (n=9).

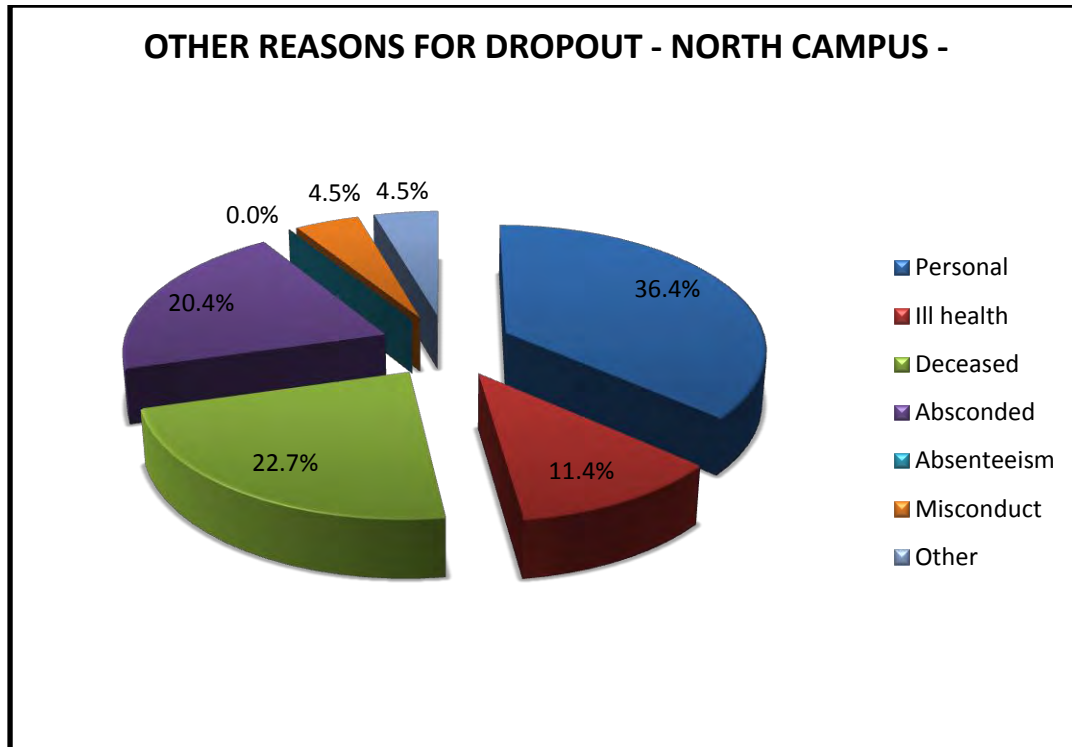


Figure 16: Other reasons for dropout in the northern campus. (n= 44/113)

5.3.1.3 Throughput in the College of Nursing

A document review of student records was done to establish the throughput rates of students enrolled in the programme from 1 July 2005 to 1 January 2009, noting that the college had its first intake of students on 1 July 2005 (KZN College of Nursing, 2013b). Eight cohorts of students were admitted to the four year programme in the period under review, ending with the 1 January 2009 cohort of students who completed on 31 December 2012.

Throughput in this study refers to completing the programme in the prescribed time of four years. The throughput rates are shown in Table 7 below

Table 7: Admission and throughput rates in the College of Nursing

Cohorts	Admission & Completion Year	Number enrolled	Throughput total	Throughput rate %	Difference in enrolment vs. throughput	
1 st Cohort	1 July 2005 - 30 June 2009	272	129	47.4%	143	52.6%
2 nd Cohort	1 Jan 2006 - 31 Dec 2009	310	155	50%	155	50%
3 rd Cohort	1 July 2006 - 30 June 2010	326	169	48,8%	157	51.2%
4 th Cohort	1 Jan 2007 - 31 Dec 2010	339	182	53.7%	157	46.3%
5 th Cohort	1 July 2007 - 30 June 2011	307	158	51.4%	149	48.6%
6 th Cohort	1 Jan 2008 - 31 Dec 2011	338	262	77.5%	76	22.5%
7 th Cohort	1 July 2008 - 30 June 2012	314	157	50%	157	50%
8 th Cohort	1 Jan 2009 - 31 Dec 2012	285	148	51.9	137	48.1%
TOTAL		2491	1360	54.3%	1131	45.7%

The analysis reveals that for every cohort of students admitted to the programme, a significantly lower number of students actually completed the programme in the regulation time of four years. This result reflects that, on average, only 54.3% of the students who had enrolled for the four year programme between 1 July 2005 and 1 January 2009 completed it in the prescribed time of four years. The rest of students either abandoned the programme or repeated a semester or module.

These results are in line with the National Council of Higher Education who reported their throughput rate (completion in regulation time) for 2006 to be 43% for 3 year degrees, 47% for 4 year degrees and 38% for 3 year diplomas (Council of Higher Education, 2013).

5.3.2 Structured questionnaire: student progress in relation to demographic data

(n=294)

This section presents the results from the structured questionnaire administered to 294 student participants from both campuses. The north campus had (n=161) participants and the south campus had (n=133) participants. The instrument measured constructs from the conceptual framework in line with the study objectives; (a) demographic factors of students; (b) factors contributing to dropout (enrolment characteristics, academic integration, social integration and student support); and (c) satisfaction level of students in the programme.

The objective regarding *the relationship between students' study progress and demographic data in the campus of offering* was addressed by measuring 17 constructs on the instrument, namely *age at time of enrolment; gender; home language; marital status; number of children; home in terms of rural or urban; type of high school attended; whether they had repeated high school; current accommodation; parents' level of education; current level of study; level at which they dropped a group; nursing as a career choice; reasons for choosing nursing; how they got to know about nursing; perceptions of nursing; and level of difficulty in course work in the for year programme*. Non-parametric tests and cross tabulations were then conducted across the campuses against *study progress* to assess the relationship between student dropout and demographic factors as well as campus of offering. Cross tabulation allowed the researcher to visually compare summary data output related to two variables within the sample, as stated in (Grove et al., 2012). The significant findings are presented below.

5.3.2.1 Age and study progress (n=294)

Participants from both campuses in the age group 19 and below were (n=6), 20-24 years (n=113), 25-29 years (n=116), 30-34 years (n=40), 35-39 years (n=14), and 40-46 years

(n=5). The highest failure rates were observed in age categories 20-24 and 25-29. The failure rate in the 20-24 age category was 30% (n=22) in the northern campus and 41% (n=16) in the southern campus and the failure rate in the 25-29 age category was 46% (n=33) in the northern campus and 44% (n=17) in the southern campus.

Across the two campuses, the high failure rate of 45% (n=50) was observed between ages 25-29; followed by 34% (n=38) in age category 20-24.

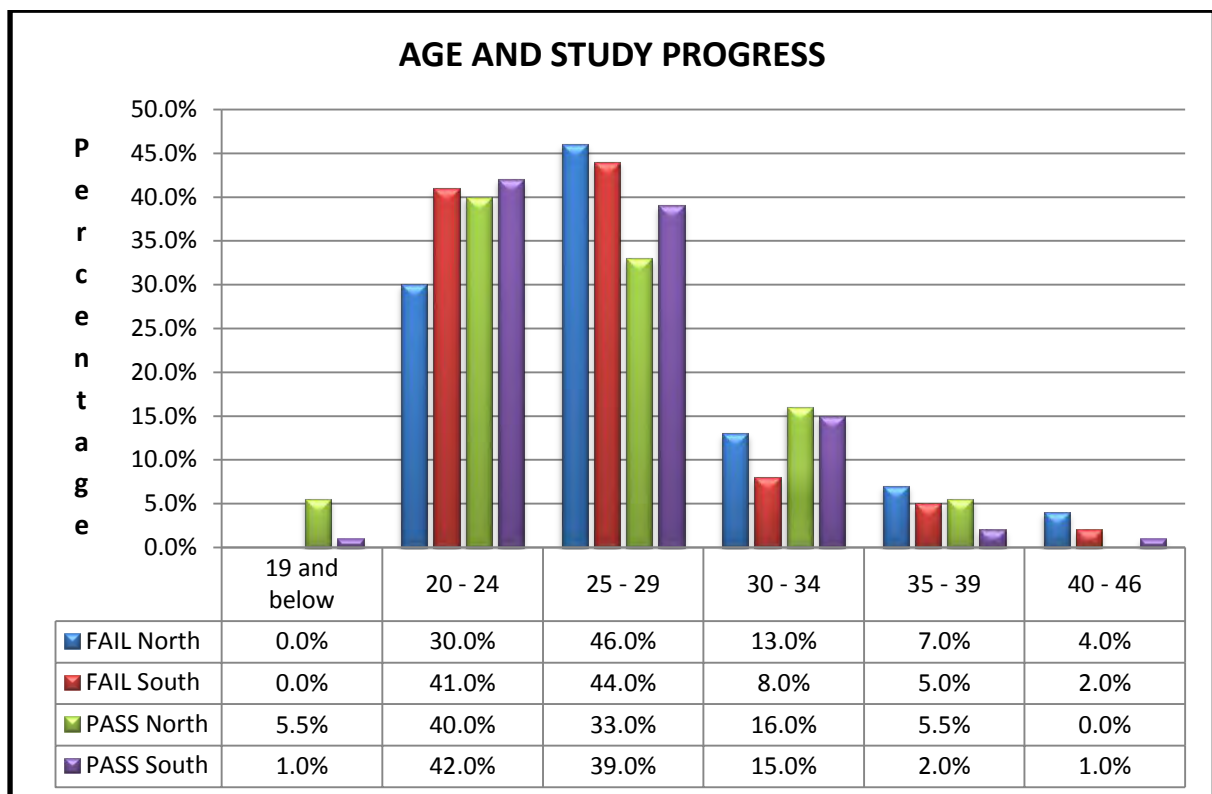


Figure 17: Cross tabulation for age and study progress in the north and south campus (n=294)

5.3.2.2 Gender and study progress (n=294)

With regard to study progress, of the 72 that failed in the north campus and 39 in the south campus the results presented in Figure 18 below show that the majority of students who failed in both campuses were female, with 77.8% (n=56) females and 22.2% (n=16) males in the northern campus and 66.7% (n=26) females and 33.3% (n=13) males in the southern

campus. Data obtained from document analysis of ex-students corroborates with that of current students reflecting a higher failure rate in females 68.3% (n=585) than males 31.7% (n=271). The picture of high failure rate amongst females can be attributed to the dominance of female participants in the study.

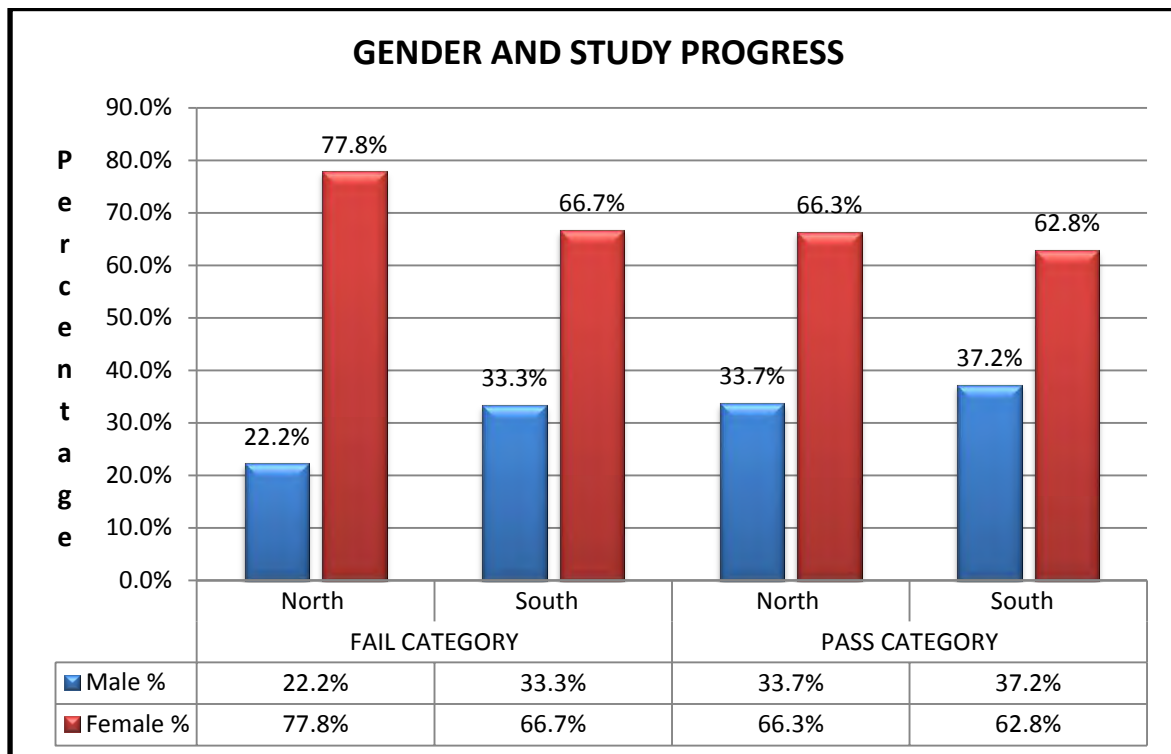


Figure 18: Cross tabulation between gender and study progress in north and south campus (n=294)

5.3.2.3 Language and study progress (n=294)

Of the 72 participants who had failed in the northern campus, 95.8% (n=69) stated that English was not their home language, while only 4.2% (n=3) indicated it was, as presented in Figure 19. Similarly of the 39 participants, from the southern campus, results showed that English was not the home language of the majority, 84.6 % (n=33) of students who had failed a course or module, with only 15.4 % (n=6) stating it was their language. This finding was corroborated by the qualitative data, where participants highlighted that language was a

barrier to their learning for both English and non-English speaking students. A chi-square test conducted to test whether there was a relationship between language and study progress showed there was a relationship between language and those that experienced academic failure with a p-value of 0.039.

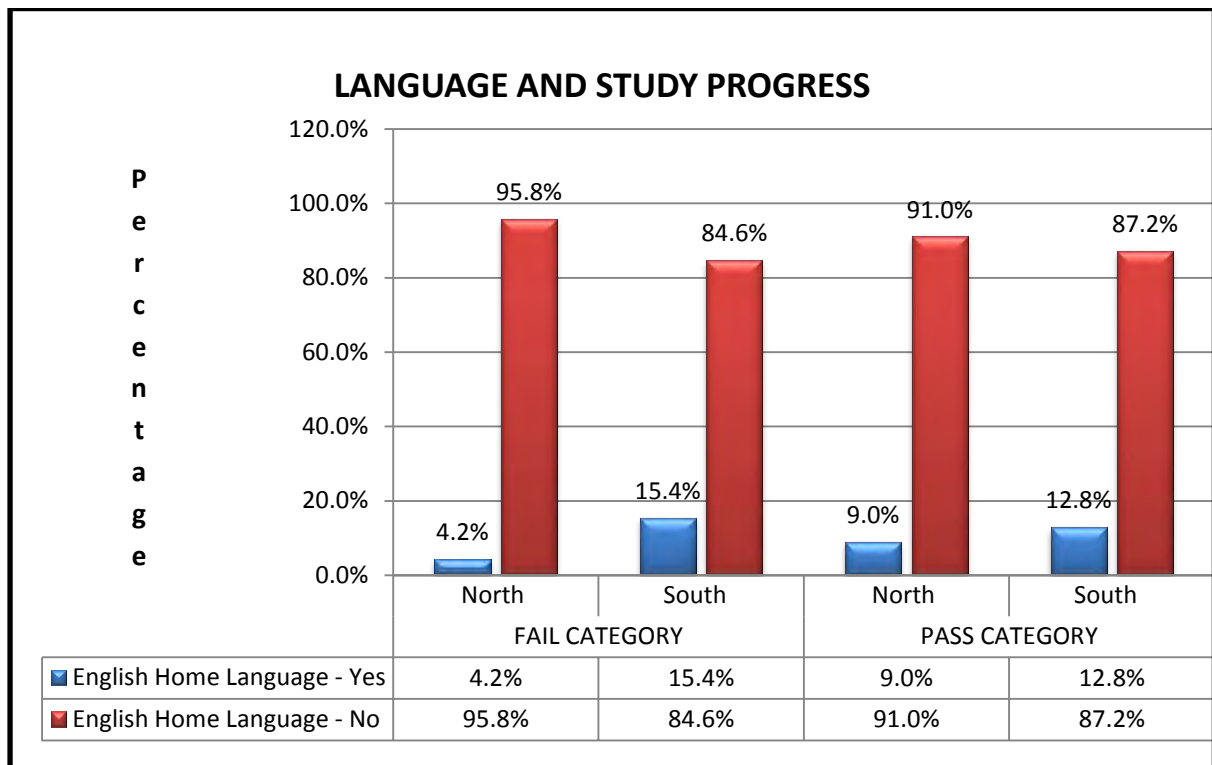


Figure 19: Cross tabulation between language and study progress in the north and south campus (n=294)

5.3.2.4 Place of residence and study progress (n=294)

The findings presented in. Figure 20 revealed that a higher percentage of students from rural areas failed courses/modules than students living in urban areas. Of the 72 participants that had failed in the northern campus, 84.7% (n= 61) resided in rural areas and 15, 3% (n=11) in

urban areas and of the 39 that had failed in the southern campus, 53.8% (n=21) resided in rural areas and 46.2% (n=18) in urban areas.

However, the researcher also compared the *pass* rate of students from rural and urban areas and found that the majority of participants from both campuses who had *passed* all subjects also came from rural areas. Of the 89 students studying in the northern campus, 83% (n=74) were from rural areas and 17% (n=5) from urban areas. Similarly, of the 94 who had *passed* all courses/modules in the southern campus, 65% (n=61) were from rural areas and 35% (n=33) from urban areas.

From these results it appears that living in rural areas had no significant impact to study progress.

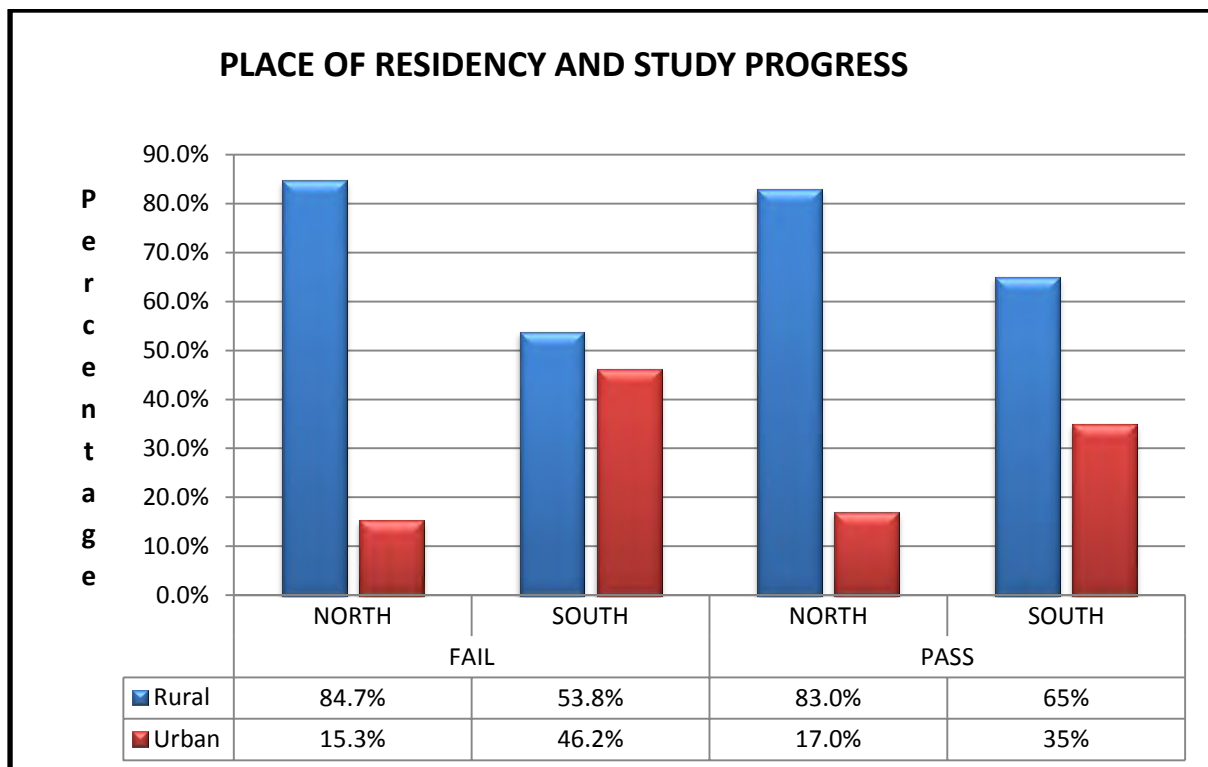


Figure 20: Cross tabulation between place of residency (rural or urban) and study progress in the north and south campus. (n=294)

5.3.2.5 High school performance and study progress (n=294)

The findings in Figure 21 revealed that 21 out of 161 students from the northern campus had repeated a class in high school and of these 21 participants, 66.7% (n=14) failed to progress satisfactorily, while 33.3% (n=7) had progressed well.

Data from the southern campus revealed that 12 out of 133 participants had repeated a class in high school and, of these, 50% had failed to progress satisfactorily and 50% had progressed well. A chi square test revealed a significant relationship between repeating high school and progressing well in the nursing programme, with a p-value of 0.004.

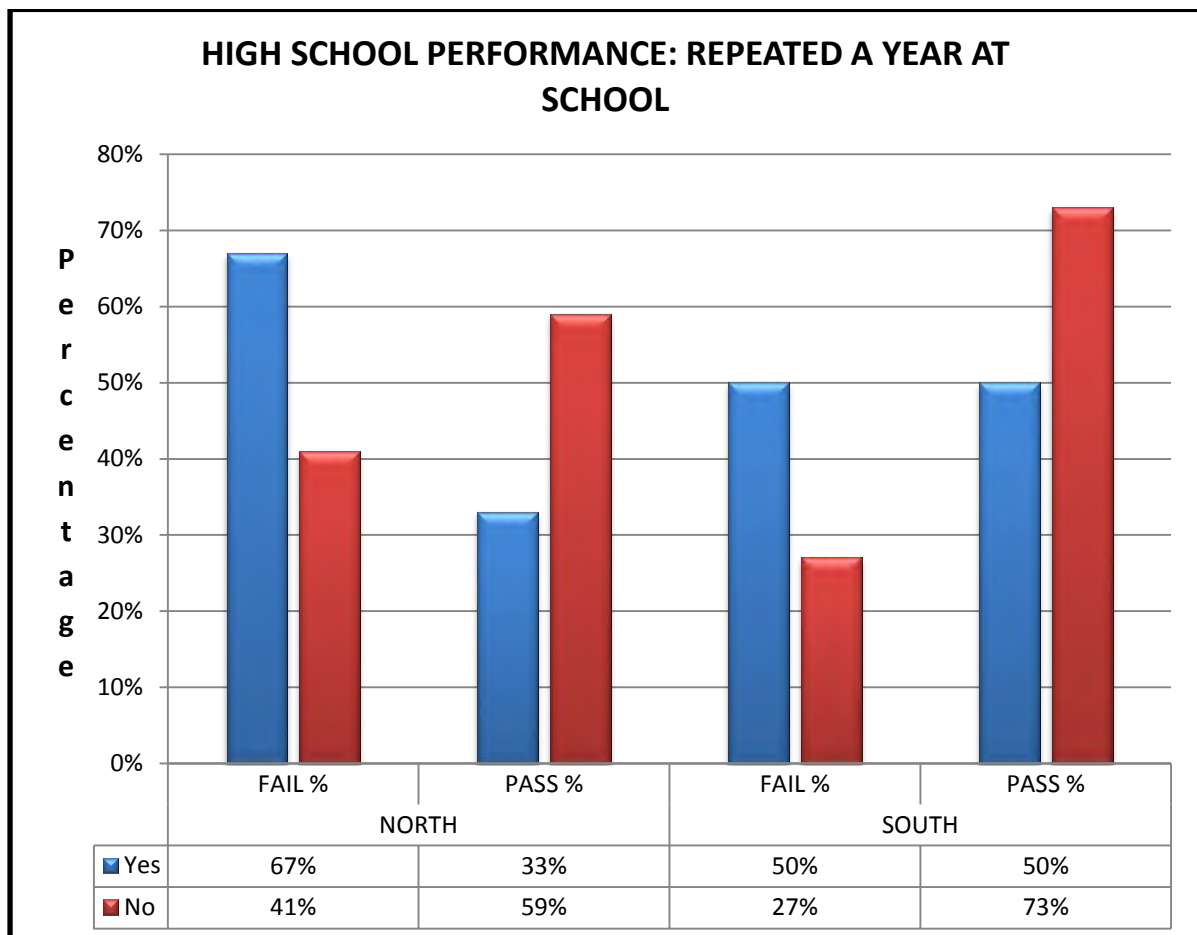


Figure 21: Cross tabulation between high school performance and study progress in the north and south campus (n=294)

5.3.2.6 Level of training and study progress (n=294)

The findings shown in Figure 22 showed that the highest proportion of failures in both campuses occurred within the fourth year of study followed by the third year. According to the results, 58% (n=29) of the participants in the northern campus and 38.7% (n=17) in the southern campus failed during their fourth year.

The highest pass rate in the northern campus was in the second year 68.6 %, (n=24) followed by first year 59 %, (n=23); the third year 56.8%, (n=21) and finally the fourth year 42%, (n=21). The highest pass rate in the southern campus was in the first year 78.6 %, (n=22), followed by the second year 75 %, (n=24), the third year 72.4 %, (n=21) and finally the fourth year 61.3 %, (n=27).

The high failure rate in the northern campus affects the total failure rate in the selected campuses. The chi square test revealed a p-value of 0.006, signifying a relationship between level of training and study progress.

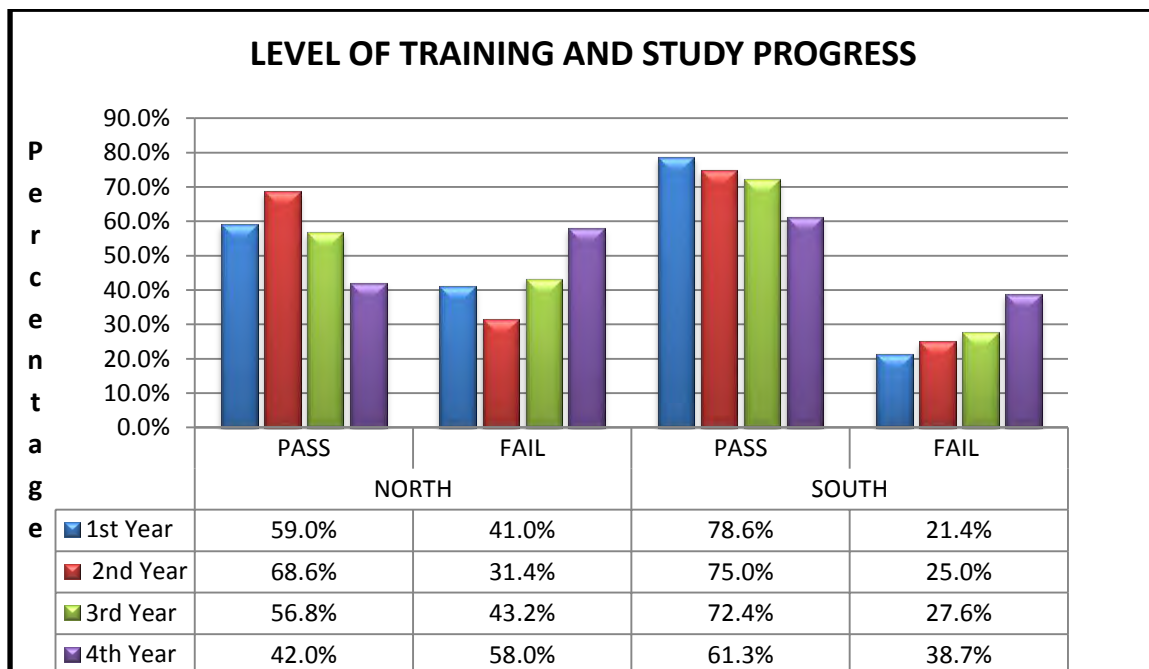


Figure 22: Cross tabulation of level of training and study progress in the north and south campus (n=294)

5.3.2.7 Nursing as a career choice (n=294)

Participants were permitted to select more than one choice for *nursing as a career of choice*.

North campus

The highest proportion from the northern campus (Figure 23), 33.3% (n=67) indicated that they had chosen nursing as a career because they could not afford their other options, 20.4% (n=41) chose nursing because they got paid while they studied, 11.9% (n=24) chose nursing because their parents or family wanted them to be a nurse and 5% (n=10) did not get accepted for other choices. A large group 29.3%, (n=59) indicated they chose nursing for other reasons.

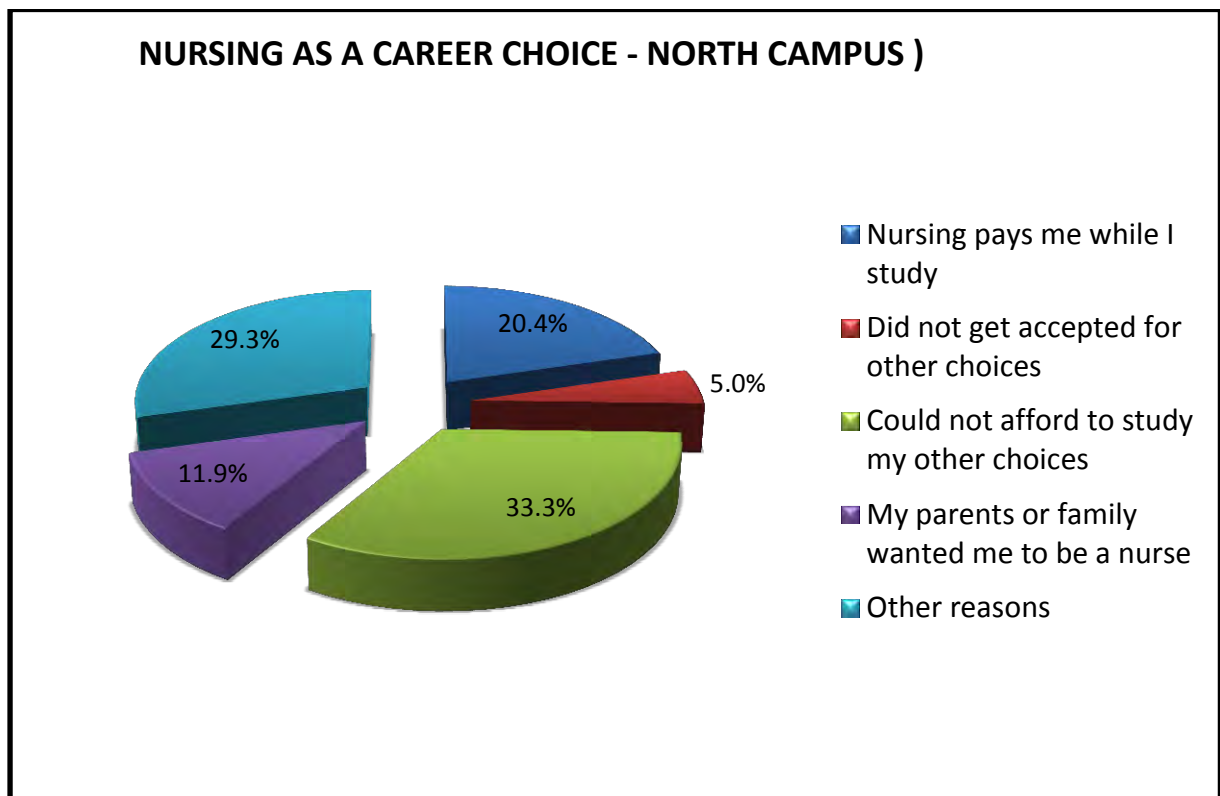


Figure 23: Nursing as a career choice: north campus (n=201)

South campus

The southern campus in Figure 24 yielded similar results with 36.2% (n=67) of the participants also indicating the main reason for choosing nursing was that they could not afford to study any of their other choices. Likewise, 25.9% (n=48) of the respondents indicated that they had chosen nursing as a career since it pays while they study, 7.6% (n=14) indicated that they had chosen nursing because they had not been accepted for other choices; and 7.6% (n=14) selected the option that their parents or family wanted them to be a nurse. A large group 22.7% (n=42) indicated they had chosen nursing for other reasons.

This finding is corroborated by the focus group interviews where many student participants in both campuses shared that they had chosen nursing for reasons similar to this result and that nursing was not their primary career choice.

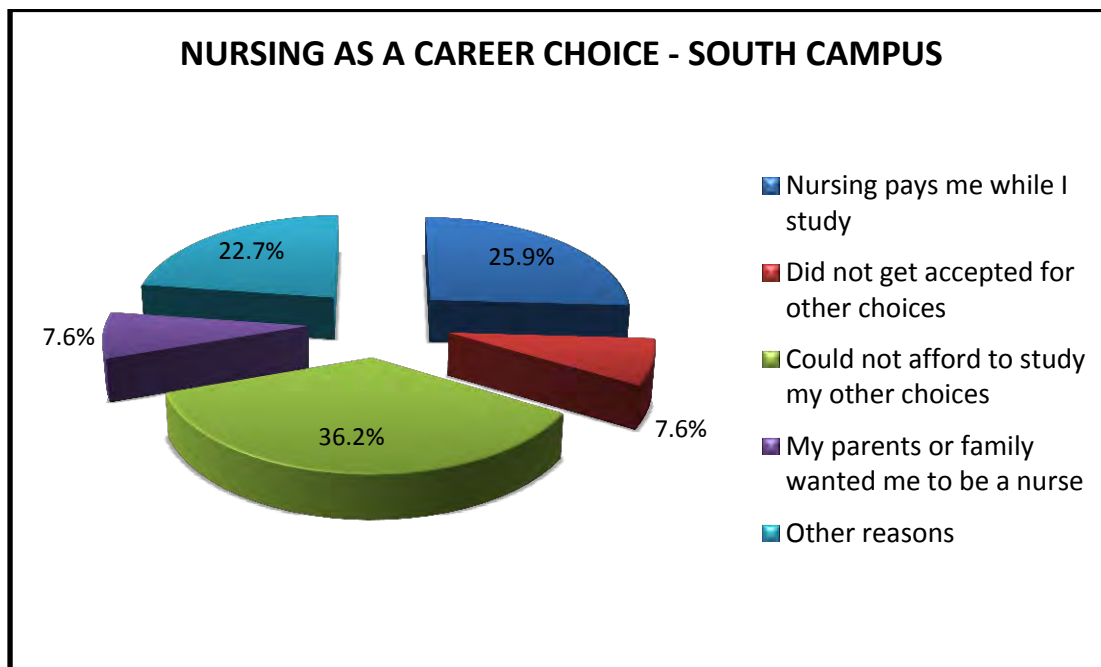


Figure 24: Nursing as a career choice: south campus (n=185)

5.3.2.8 Trends in level of difficulty in various disciplines/courses (n=294)

In comparing the responses of students from the two campuses, illustrated in Tables 8 and 9 below, it is significant to note that students in both campuses rated *Anatomy and Physiology* and *Midwifery* to be *very difficult* subjects. The finding revealed that 44.8 % (n=69) from the northern campus and 42.9% (n=57) from the southern campus rated Anatomy and Physiology very difficult and 48% (n=25) from the northern campus and 65.1% (n=28) from the southern campus rated Midwifery very difficult. Students from both campuses rated Fundamental Nursing Science, General Nursing, Ethos and Professional Practice, Community Nursing, Psychiatric Nursing and Clinical Nursing as *not as difficult* and the majority of students from both campuses rated Social Sciences to be the *least difficult*.

Table 8: Level of difficulty in various disciplines/courses: north campus (n=161)

NORTH CAMPUS								
Subject	Least Difficult	%	Not So Difficult	%	Very Difficult	%	Total	%
A&P	22	14.3	63	40.9	69	44.8	154	100
FNS	64	42.7	79	52.7	7	4.7	150	100
GNS	40	33.1	77	63.6	4	3.3	121	100
EPP	30	24.2	66	53.2	28	22.6	124	100
Community	33	22.3	90	60.8	25	16.9	148	100
Social Science	104	69.8	44	29.5	1	0.7	149	100
Midwifery	4	7.7	23	44.0	25	48.0	52	100
Psych	9	25.0	25	69.4	2	5.6	36	100
Clinical Nursing	20	21.1	61	64.2	14	14.7	95	100

Table 9: Level of difficulty in various disciplines/courses: south campus (n=133)

SOUTH CAMPUS								
Subject	Least Difficult	%	Not So Difficult	%	Very Difficult	%	Total	%
A&P	27	20.5	48	36.1	57	42.9	132	100
FNS	46	35.9	63	49.2	19	14.8	128	100
GNS	29	27.9	59	56.7	16	15.4	104	100
EPP	18	17.1	60	57.1	27	25.7	105	100
Community	58	46.4	60	48.0	7	5.6	125	100
Social Science	88	68.8	38	29.7	2	1.6	128	100
Midwifery	5	11.6	10	23.3	28	65.1	43	100
Psychiatry	5	20.0	18	72.0	2	8.0	108	100
Clinical Nursing	18	18.0	52	52.0	30	30.0	100	100

5.3.3 Structured questionnaire: factors contributing to dropout (n=294)

In order to address the objective regarding *factors contributing to dropout or attrition*, four sections were investigated namely, *enrolment characteristics* which comprised of personal and financial characteristics; *academic integration*; *social integration*; and *student support*.

5.3.3.1 Enrollment characteristics

The section regarding enrollment characteristics included two subcategories; *personal circumstances*, with a total of seven items; and *financial reasons*, with a total of four items,

which consisted of a three response options (major reason, minor reason and not a reason) as illustrated in Table 10 and 11 below.

Personal circumstances. Only items that yielded a significant result in the construct “personal circumstances” contributing to dropout will be discussed.

Findings presented in Table 10 below revealed that 31.1% (n=50) of students in the northern campus stated that the place they live in is not conducive for studying and is therefore a major problem, whereas only 18% (n=24) of the students in the southern campus found this item to be a major problem. With regard to home responsibilities being too great, 28.6% (n=46) of students in the northern campus and 23.3% (n=31) in the southern campus stated this to be a major problem. Ill health was found to be a contributory factor, with 16.8% (n=27) of students in the northern campus and 6.8% (n=9) in the southern campus identifying this as a major problem. Students also indicated that family problems contributed to dropout, with 18.6% (n=30) of students in the northern campus and 9% (n=12) in the southern campus stating this item to be a major problem.

The results show that personal circumstances do contribute to dropout and this is noted more in the northern than the southern campus.

Table 10: Personal circumstances: north and south campus

Personal Circumstances	NORTHERN CAMPUS (n=161)								SOUTHERN CAMPUS (n=133)							
	Major reason		Minor reason		Not a reason		Total		Major reason		Minor reason		Not a reason		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Studies too time consuming	31	19.3	41	25.5	89	55.3	161	100	24	18	44	33.1	65	48.9	133	100
The place I live in is not conducive for studying	50	31.1	45	28	66	41.0	161	100	15	11.3	33	24.8	85	63.9	133	100
Home responsibilities are too great	46	28.6	43	26.7	72	44.7	161	100	31	23.3	36	27.1	66	49.6	133	100
Personal problems	30	18.6	49	30.4	82	50.9	161	100	32	24.1	53	39.8	48	36.1	133	100
Ill health	27	16.8	24	14.9	110	68.3	161	100	9	6.8	20	15	104	78.2	133	100
Family problems	30	18.6	48	29.8	83	51.6	161	100	12	9	38	28.6	83	62.4	133	100
Wrong career choice	10	6.2	15	9.3	136	84.5	161	100	6	4.5	16	12	111	83.5	133	100

Financial reason. The only item that yielded a significant finding under the construct financial reasons is “*financial aid not being sufficient*” as illustrated in Table 11 below. In both campuses, the majority of students cited that insufficient financial aid was a major factor contributing to dropout. However, it seemed that students from the northern campus experienced more financial problems than those of the southern campus, with 45.3% (n=73) of the participants from the northern campus and 37.6% (n =50) from the southern campus citing this option as a major reason for poor progress.

Table 11: Financial reasons: north and south campus

Financial Reasons	NORTHERN CAMPUS (n=161)								SOUTHERN CAMPUS (n=133)							
	Major reason		Minor reason		Not a reason		Total		Major reason		Minor reason		Not a reason		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
I did not have money to get the books I needed to study	42	26.1	35	21.7	84	52.2	161	100	27	20.3	37	27.8	69	51.9	133	100
Financial aid (student salary/bursary) is not sufficient	73	45.3	21	13	67	41.6	161	100	50	37.6	21	15.8	62	46.6	133	100
I do not have enough money to maintain myself while I am studying	53	32.9	39	24.2	69	42.9	161	100	37	27.8	42	31.6	54	40.6	133	100
Child care not available or too costly	21	13	24	14.9	116	72	161	100	16	12	20	15	97	72.9	133	100

5.3.3.2 Academic integration factors

The section regarding *Academic Integration* also included 11 items with the three option response as indicated in Tables 12 and 13 below. The items presented in this section indicate that the majority of students felt most items were not reasons for dropout. The significant factors are discussed as follows:

A large number of participants from the northern campus 47.2%, (n=76) indicated that *insufficient time attributed to various modules* is a major reason for dropout; while 26.7% (n=43) felt it is minor reason and 26.1% (n=42) felt it is not a reason for dropout. The majority of participants from the southern campus 52.6%, (n=70) also felt that *insufficient time in the various modules* is a major reason for dropout. Only 23.3% (n=31) felt it to be a minor reason and 24.1% (n=32) felt it is not a reason at all.

Many of the participants in both campuses, 42.2% (n=68) from the northern campus and 30.1% (n=40) from the southern campus, selected the option of *not having the skill of note taking* as a major reason for failing a course/module. In the northern campus, 50.9% (n=82) participants indicated it was a minor reason and 6.8% (n=11) that it was not a reason, while in the southern campus, 45.9% (n=61) said it was a minor reason and 24.1% (n= 32) not a reason.

The course being difficult was selected as a major reason for 24.2% (n=39) of participants in the northern campus while 42.2% (n=68) indicated that it was a minor reason. In the southern campus, only 27.8% (n=37) of participants chose the major reason option, while 46.6% (n=62) said it was a minor reason. This is in line with what emerged in qualitative data in that the participants did not expect nursing to be this difficult.

Poor study habits came up as a major factor contributing to poor progress for 26.7% (n=43) of participants from the northern campus and a minor reason for 29.2% (n=47), while, 27.8% (n=37) of participants in the southern campus felt it was a major reason and 28.6% (n=38) felt it a minor reason.

From these results it appears that students in both the northern and southern campuses found that the time allocated to various modules was insufficient and therefore a major factor contributing to dropout. This result is in line with results from the qualitative part of the study where it emerged that the time allocated for some subjects was too short. Although there is a slight margin of difference between the campuses, students from both campuses cited that the difficult course and poor study skills were major factors contributing to dropout

Dissatisfaction with methods used for teaching was perceived mainly by northern campus students, with 22.4% (n=36) citing this as a major reason for dropout and 33.5% (n=54) as a minor reason. In contrast, students of the southern campus did not seem to regard teaching methods as a reason for poor progress, with only 9.8% citing it to be a major problem and 27.8% (n=37) as a minor reason.

It is also interesting to note that a percentage of students in both campuses indicated that not making use of advisory services is a major factor contributing to dropout. Findings showed that 18% (n=29) of participants in the northern campus and 12% (n=16) in the southern campus selected this option.

In summary the north students perceived academic factors as a reason for dropout more than the south students.

Table 12: Academic integration factors contributing to dropout: north campus

NORTH CAMPUS (n= 161)								
Academic Reasons	Major reason		Minor reason		Not a reason		Total	
	n	%	n	%	n	%	n	%
Found the course to be too difficult	39	24.2	68	42.2	54	33.5	161	100
Poor study habits or skills	43	26.7	47	29.2	71	44.1	161	100
Course not challenging enough	15	9.3	34	21.1	112	69.6	161	100
Bad experiences in clinical settings	45	28	49	30.4	67	41.6	161	100
Dissatisfaction with methods used for teaching	36	22.4	54	33.5	71	44.1	161	100
Language barriers e.g. English as a second language	20	12.4	35	21.7	106	65.8	161	100
I do not understand what is taught to me	15	9.3	38	23.6	108	67.1	161	100
I do not make use of student advisory / counselling services	29	18	37	23	95	59	161	100
The time in the various modules is insufficient	76	47.2	43	26.7	42	26.1	161	100
The courses demand the kinds of study and work that I dislike or have trouble with.	10	6.2	41	25.5	110	68.3	161	100
I cannot take effective notes /or do not have the skill for it	68	42.2	82	50.9	11	6.8	161	100

Table 13: Academic integration factors contributing to dropout: south campus

SOUTH CAMPUS (n=133)								
Academic Reasons	Major reason		Minor reason		Not a reason		Total	
	n	%	n	%	n	%	n	%
Found the course to be too difficult	37	27.8	62	46.6	34	25.6	133	100
Poor study habits or skills	37	27.8	38	28.6	58	43.6	133	100
Course not challenging enough	3	2.3	20	15	110	82.7	133	100
Bad experiences in clinical settings	13	9.8	52	39.1	68	51.1	133	100
Dissatisfaction with methods used for teaching	7	5.3	37	27.8	89	66.9	133	100
Language barriers e.g. English as a second language	6	4.5	34	25.6	93	69.9	133	100
I do not understand what is taught to me	3	2.3	36	27.1	94	70.7	133	100
I do not make use of student advisory / counselling services	16	12.0	45	33.8	72	54.1	133	100
The time in the various modules is insufficient	70	52.6	31	23.3	32	24.1	133	100
The courses demand the kinds of study and work that I dislike or have trouble with.	11	8.3	43	32.3	79	59.4	133	100
I cannot take effective notes /or do not have the skill for it	40	30.1	61	45.9	32	24.1	133	100

5.3.3.3 Social integration factors

This section consisted of six items with the three response options (major reason, minor reason and not a reason) as shown in Table 14 below. The findings in both campuses indicate that the majority of participants felt that these items were not reasons for dropout. The only area of concern in both campuses is the concept that *nursing is not what students expected it to be* with 27.3% (n=44) of participants in the northern campus selecting it as a major reason and 29.2% (n=47) a minor reason, and 27.8% (n=37) in the southern campus selecting it as a major reason and 39.1% (n=52) a minor reason.

This is in line with the findings from the focus group interviews, where students said that their expectations were almost completely different to what they experienced in both the theory and clinical areas of practice.

Table 14: Social integration factors: north and south campus

Social Integration	NORTHERN CAMPUS (n=161)								SOUTHERN CAMPUS (n=133)							
	Major reason		Minor reason		Not a reason		Total		Major reason		Minor reason		Not a reason		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
I do not enjoy what I am studying	6	3.7	23	14.3	132	82	161	100	3	2.3	16	12.0	114	85.7	133	100
I do not feel comfortable being a student.	13	8.1	13	8.1	135	83.9	161	100	6	4.5	17	12.8	110	82.7	133	100
I am unable to get to know other students and staff like other students	4	2.5	13	8.1	144	89.4	161	100	3	2.3	16	12.0	114	85.7	133	100
Being a student nurse made me feel worse about myself than if I was doing something else	9	5.6	8	5.0	144	89.4	161	100	4	3.0	24	18.0	105	78.9	133	100
I am not able to get involved in extracurricular activities as other students did	18	11.2	35	21.7	108	67.1	161	100	9	6.8	24	18.0	100	75.2	133	100
Studying nursing is not the way I expected it to be	44	27.3	47	29.2	70	43.5	161	100	37	27.8	52	39.1	44	33.1	133	100

5.3.3.4 Student support factors

The questionnaire had five items pertaining to whether inadequate student support is a factor contributing to poor progress. Each item had three response options, as illustrated in Table 15 below. The majority of students in the northern campus 55.3%, (n=89) felt that *lack of adequate student support and mentoring services* is a major reason for dropout. Similarly a large proportion, 42.9% (n=57) of participants in the southern campus said this is a major reason for dropout.

A large proportion of the students in the northern campus 40.4%, (n=65) indicated that *the learning environment not facilitating their learning* is a major reason for dropout while only 3.8% (n=5) in the southern campus identified this to be a major reason.

In the northern campus, a large proportion of participants 43.5% (n=70) said that *the learning environment not facilitating their learning experience in the clinical area* is a major reason for dropout. Similarly in the southern campus, a significant number of students 37.6%, (n=50) indicated this to be a major reason for dropout

However with regard to the *learning environment not facilitating their learning experience in the college*, students of the northern campus perceived this to be a significant factor contributing to dropout, with 40.4% (n=65) stating this to be a major factor. In contrast, the students in the southern campus did not perceive this factor to be a major problem, with only 3.8% (n=5) stating it as a major reason.

The findings reveal that participants in both campuses indicated that they do not receive enough support, although their perceptions of lack of support seem worse in the northern campus than the southern campus. This is supported by findings that emerged from the focus group interviews whereby student participants in both campuses reported, among other

things, that reasons for dropout or failure included long working hours in the clinical areas; overwork due to inadequate staff in the clinical areas, which also results in minimal mentoring; unfriendly library hours; the lack of a well-resourced library, teaching strategies that is not motivating; and poor/ inadequate accommodation facilities.

Table 15: Student support factors: north and south campus

Student Support	NORTHERN CAMPUS (n=161)								SOUTHERN CAMPUS (n=133)							
	Major reason		Minor reason		Not a reason		Total		Major reason		Minor reason		Not a reason		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
The lecturers do not understand my needs as a student	42	26.1	42	26.1	77	47.8	161	100	7	5.3	31	23.3	95	71.4	133	100
Lack of support from peers/ friends / family	12	7.5	39	24.2	110	68.3	161	100	6	4.5	36	27.1	91	68.4	133	100
Lack of adequate student support and mentoring services	89	55.3	65	40.4	7	4.3	161	100	57	42.9	61	45.9	15	11.3	133	100
The learning environment does not facilitate my learning in college	65	40.4	46	28.6	50	31.1	161	100	5	3.8	16	12.0	112	84.2	133	100
The learning environment does not facilitate my learning in the clinical area	70	43.5	52	32.3	39	24.2	161	100	50	37.6	42	31.6	41	30.8	133	100

5.3.4 Comparison in enrollment characteristics, academic integration, social integration and student support between the northern and southern campuses (n=294)

A Mann Whitney U test was conducted to explore significant differences between findings of the northern and southern campuses for enrollment characteristics, academic integration, social integration and student support. According to Polit and Beck (2008), the Mann Whitney test is used to test the difference between two independent groups based on ranked scores. In this study the two independent groups were the two campuses. The level of significance was set at 0.05.

Significant differences were found between the two campuses with respect to personal and financial characteristics. The distribution was not the same for personal circumstances as a reason for poor academic progress when tested against study progress between the students that were progressing well and those experiencing failure, with an alpha of 0.046 being obtained. Similarly, financial variables as a reason for poor academic progress also showed the distribution was not the same for study progress between the students that were progressing well and those experiencing failure, with an alpha of 0.002.

As for academic variables as a reason for poor academic progress, a significant difference was obtained between the two campuses, with an alpha of 0.047. Similarly, a significant difference was obtained, an alpha of 0.001, between the two campuses for lack of student support as a reason for poor academic progress.

Therefore, to summarise the findings from the two campuses with regard to factors contributing to dropout, the results show that the conditions in the southern campus are more conducive for students to pass than in the northern campus. The student support system seems better in the southern campus than the northern campus and, with respect to personal circumstances; findings revealed that students in the northern campus experience more

difficulties than those in the southern campus. Although students in both campuses indicated that they experience financial hardships, these seem more pronounced in the north than the south. Similarly, students in the northern campus experienced more challenges with respect to the academic factors contributing to passing the programme than those in the southern campus, the main areas of dissatisfaction being methods used for teaching, language barriers and not making use of student advisory services. Other academic factors that were identified as challenging by students from both campuses were insufficient time allocated to various modules, the course being difficult and poor study habits.

5.3.5 Levels of satisfaction with the programme (n=294)

This section consisted of a total of 22 items in the form of a Likert scale with four options ranging between “none”, “little”, “moderate” and “great”. In order to facilitate analysis when reporting and discussing these terms, they were regrouped to “little”, “moderate” and “great” by combining “none” and “little”. The findings are presented under 3 sections namely *enrollment and integration*, *student engagement and involvement* and *student support* in the tables that follow. The findings for the northern campus will be discussed first followed by those of the southern campus.

5.3.5.1 Levels of satisfaction: north campus (n=161)

Enrollment and integration: The results as presented in Table 16 below for the northern campus show that a large group of the students 47.3% (n=72) indicated that they had “little” satisfaction with regards to *information given about the college/campus prior to registering/enrolling as a student*. A total of 31.1% (n=50) were moderately satisfied, with only 21.7% (n=35) opting for the greatly satisfied option. A high proportion of students seemed satisfied with *information given about nursing as a career*, with 46.6% (n=75) reporting great satisfaction, 35.4% (n=57) selecting the moderate satisfaction option and

18.0% (n=29) indicating little satisfaction. A high proportion of students were also satisfied with *the recruitment and selection process*, with 37.9% (n=61) being greatly satisfied and 32.9% (n=53) moderately satisfied. A group of 29.2% (n=47) claimed little satisfaction. With regard to the *registration/enrollment process* 42.2% (n=68) reported being greatly satisfied, 36.6% (n=59) reported a moderate level of satisfaction and only 21.1% (n=34) of the participants indicated having little satisfaction. A high proportion of students 45.3%, (n=73) were greatly satisfied with the *orientation and induction process*, while 31.1% (n=50) and 23.6% (n= 38) indicated little satisfaction

Table 16: Level of satisfaction in the programme: enrollment and integration: north campus (n=161)

Enrollment and integration North campus		Little		Moderate		Great		Total	
		n	%	n	%	n	%	n	%
1	Information given to you about this college/campus prior to registering /enrolling as a student	76	47.3	50	31.1	35	21.7	161	100
2	Information given to you about nursing as a career	29	18.0	57	35.4	75	46.6	161	100
3	The recruitment and selection process of this college	47	29.2	53	32.9	61	37.9	161	100
4	The registration/enrolment process at campus on commencement of training	34	21.1	59	36.6	68	42.2	161	100
5	The orientation and induction process as a student	38	23.6	50	31.1	73	45.3	161	100

Student engagement and involvement (teaching and learning): The satisfaction levels of students in the northern campus are presented in Table 17 below. As for the *campus environment*, 41% (n=66) of the participants were moderately satisfied and 36% (n=58) indicated having little satisfaction. Only 23% (n=37) responding that they were greatly

satisfied. A high proportion of students seemed relatively satisfied with *the amount of contact with lecturers*, 39.1% (n=63) being moderately satisfied and 37.9% (n=61) greatly satisfied. Only 23% (n=37) opted for the little satisfaction option.

Many students 47.8 %, (n=77) also reported a moderate satisfaction level *with the teaching capacity* of their lecturers, 39.9% (n=64) were greatly satisfied and only 12.4% (n=20) reported little satisfaction.

Regarding the *curriculum/course content*, 49.1% (n=79) indicated that they were moderately satisfied, 34.2% (n=55) responded they were greatly satisfied and only 16.7% (n=27) claimed little satisfaction. The findings also show that many students 36 %, (n=58) were moderately satisfied with the rules in the learners guide, 32.9% (n=53) were greatly satisfied and 31% (n=50) had little satisfaction.

In terms of *involvement with academic staff*, a majority of 54.1% (n=87) reported little satisfaction, 36.6% (n=15) claimed to be moderately satisfied and only 9.3% (n=15) reported great satisfaction. The item regarding *involvement in class participation* found that 42.9% (n=69) of the students were moderately satisfied, 33.5% (n=55) were greatly satisfied and 23.6% (n=38) claimed little satisfaction. Similarly, the *involvement with peers* item also found that 46.6% (n=75) were moderately satisfied, 33.5% (n=55) were greatly satisfied and 19.9% (n=32) had little satisfaction.

The item on *mentoring in the clinical placement* area yielded a result indicating low satisfaction with the majority of students, 42.8% (n=69) reporting little satisfaction and 31.7% (n=51) claiming moderate satisfaction. Only 25.5% (n=41) reported great satisfaction. Likewise, the majority of respondents 85.1%, (n=137) reported little satisfaction with *extra-curricular opportunities*, compared to 10.6% (n=17) who were moderately satisfied and only 4.3% (n=7) who claimed to be greatly satisfied. The item regarding *feedback about student's*

performance found 38.5% (n=62) of the participants indicating moderate satisfaction, 35.4% (n=57) great satisfaction and 26.1% (n=42) little satisfaction.

The item relating to *opportunities for resumption of training* had the lowest satisfaction level with all participants 100 %, (n=161) reporting little satisfaction.

Table 17: Level of satisfaction in the programme: student engagement and involvement: north campus (n=161)

Student engagement and involvement – North campus		Little		Moderate		Great		Total	
		n	%	n	%	n	%	n	%
1	The campus environment in general	58	36.0	66	41	37	23.0	161	100
2	Amount of contact with your lecturers	37	23.0	63	39.1	61	37.9	161	100
3	Teaching capacity of your lecturers	20	12.4	77	47.8	64	39.9	161	100
4	Curriculum/course content	27	16.7	79	49.1	55	34.2	161	100
5	Rules in the learner information guide	50	31.0	58	36.0	53	32.9	161	100
6	Involvement with academic staff	87	54.1	59	36.6	15	9.3	161	100
7	Involvement in class participation	38	23.6	69	42.9	54	33.5	161	100
8	Involvement with peers	32	19.9	75	46.6	54	33.5	161	100
9	Mentoring in the clinical placement areas	69	42.8	51	31.7	41	25.5	161	100
10	Extra - curricular opportunities e.g. sports, choir	137	85.1	17	10.6	7	4.3	161	100
11	Feedback about my performance	42	26.1	62	38.5	57	35.4	161	100
12	Opportunities for resumption to training	161	100	0	0	0	0	161	100

Student support: When it came to *student support services* in the north campus as presented in Table 18 the majority of the students 71.5% (n=115) reported little satisfaction, with a few 19.9% (n=32) indicating moderate satisfaction and only 8.7% (n=14) reporting great satisfaction. Another interesting finding was that the majority of students 85% (n=137) also reported *little satisfaction with adequacy of books in the library and teaching aids*, while only

11.8% (n=19) claimed moderate satisfaction and 3.1% (n=5) indicated that they were greatly satisfied. The results also indicate that most of the participants, 86.9% (n=140) reported little satisfaction with *recreational facilities on campus*, unlike 10.6% (n=17) who were moderately satisfied with only a few 2.5% (n=4) claiming great satisfaction. Furthermore, most students 70.2 %, (n=113) reported little satisfaction *with transport to clinical facilities for practical learning*, compared to only 21.7% (n=35) who were moderately satisfied and 8.1% (n=13) who reported great satisfaction. The majority of students 68.3% (n=110) also reported little satisfaction regarding *accommodation facilities* with only 22.4% (n=36) being moderately satisfied and 9.3% (n=15) who were greatly satisfied.

Table 18: Level of satisfaction in the programme: student support: north campus (n=161)

Student support North campus		Little		Moderate		Great		Total	
		n	%	n	%	n	%	n	%
1	Student support services e.g. counselling, advising, mentoring	115	71.5	32	19.9	14	8.7	161	100
2	Adequacy of books in the library and teaching aids	137	85.0	19	11.8	5	3.1	161	100
3	Recreational facilities at the campus	140	86.9	17	10.6	4	2.5	161	100
4	Transport to clinical facilities for practical learning	113	70.2	35	21.7	13	8.1	161	100
5	Accommodation facilities for students	110	68.3	36	22.4	15	9.3	161	100

5.3.5.2 Levels of satisfaction - south campus (n=133)

This section measuring the level of satisfaction for the southern campus had the same 22 items presented on a Likert scale, with four options ranging between “none”, “little”, “moderate” and “great”. In order to facilitate analysis when reporting and discussing these terms, they were also regrouped to “little”, “moderate” and “great” by combining “none” and “little” as shown in the tables below. The findings are presented under 3 sections namely

enrollment and integration, student engagement and involvement and student support in the tables that follow.

Enrollment and integration: The findings for the south campus indicated in Table 19 below show a large number of the students 36% (n=48) expressed little satisfaction with respect to *information given about the college/campus* prior to registration.

A total of 32.3% (n=43) reported great satisfaction, while 31.6% (n=42) reported moderate satisfaction. A high proportion of students seemed satisfied with *information given about nursing as a career*, with 38.3% (n=51) reporting moderate satisfaction and 36.1% (n=48) selecting the great satisfaction option, however 25.5% (n=34) indicated little satisfaction.

A high proportion of students were also satisfied with *the recruitment and selection process*, with 38.3% (n=51) being moderately satisfied and 34.6% (n=46) greatly satisfied. A group of 27.1% (n=36) claimed little satisfaction.

A high proportion of students, 44.4% (n=59) reported a moderate level of satisfaction with the *registration/enrolment process*, 41.4% (n=55) of the participants reported being greatly satisfied, and 14.3% (n=19) indicated little satisfaction.

The majority of students 54.9%, (n=73) were greatly satisfied with the *orientation and induction process*, while 36.1% (n=48) were moderately satisfied and 9.1% (n=16) had little satisfaction.

Table 19: Level of satisfaction in the programme: enrollment and integration: south campus (n=133)

Enrollment and integration South campus		Little		Moderate		Great		Total	
		n	%	n	%	n	%	n	%
1	Information given to you about this college/campus prior to registering /enrolling as a student	48	36	42	31.6	43	32.3	133	100
2	Information given to you about nursing as a career	34	25.5	51	38.3	48	36.1	133	100
3	The recruitment and selection process of this college	36	27.1	51	38.3	46	34.6	133	100
4	The registration /enrolment process at campus on commencement of training	19	14.3	59	44.4	55	41.4	133	100
5	The orientation and induction process as a student	16	9.1	48	36.1	73	54.9	133	100

Student engagement and involvement (teaching and learning): The satisfaction levels of students in the south campus are presented in Table 20 below. As for the *campus environment*, 41% (n=66) were moderately satisfied, 36% (n=58) indicated having little satisfaction, with a smaller number of 23% (n=37) responding that they were greatly satisfied.

A high proportion of students seemed satisfied with *the amount of contact with lecturers*, 53.4% (n=71) being greatly satisfied and 36.1% (n=48) moderately satisfied. Only 10.5% (n=14) opted for the little satisfaction option.

Majority of the students, 63.2% (n=84) also selected the great satisfaction option for the *teaching capacity of their lecturers*, 35.3% (n=47) were moderately satisfied and only 1.5% (n=2) reported little satisfaction.

Regarding the *curriculum/course content*, 48.1% (n=64) indicated that they were greatly satisfied, 43.6% (n=58) responded they were moderately satisfied and only 8.3% (n=11) claimed little satisfaction.

The findings also showed that the highest proportion of students 39.1% (n=52) were greatly satisfied with *the rules in the learners guide*, 37.6% (n=50) were moderately satisfied and 23.3% (n=31) had little satisfaction.

Participants' responses indicated that they were not completely satisfied with their *involvement with academic staff* as only 22.6% (n=30) selected the great satisfaction option. The findings show that a high proportion of the students being either moderately satisfied 46.6% (n=62) or little satisfied 30.8% (n=41).

However, a high proportion of students 56.4% (n=75) were moderately satisfied with *involvement in class participation* and 33.8% (n=45) were greatly satisfied. Only 9.8% (n=13) opted for the little satisfaction level. The *involvement with peers* item found that 48.9% (n=65) were greatly satisfied, 39.1% (n=52) were moderately satisfied and 12% (n=16) expressed little satisfaction.

According to the findings, 45.1% (n=60) students reported moderate satisfaction regarding *mentoring in the clinical placement areas*, with 27.9% (n=37) indicating little satisfaction and 27.1% (n=36) reporting great satisfaction level.

Interestingly, most students 62.4 % (n=83) reported little satisfaction with *extra-curricular opportunities*, with 25.6% (n=34) claiming moderate satisfaction and only 12% (n=16) indicating a great level of satisfaction. The item regarding *feedback about student's performance* found 50.4% (n=67) of the participants indicating great satisfaction, 36.8% (n=49) moderate satisfaction and 12.8 % (n=17) little satisfaction.

Lastly, almost all 99.3% (n=132) of the respondents indicated little satisfaction in terms of *opportunities for resumption to training*. A mere 0.8% (n=1) reported moderate satisfaction with this item

Table 20: Level of satisfaction in the programme: student engagement and involvement: south campus (n=133)

Student engagement and involvement-south campus		Little		Moderate		Great		Total	
		n	%	n	%	n	%	n	%
1	The campus environment in general	9	9.1	55	41.4	66	49.6	133	100
2	Amount of contact with your lecturers	14	10.5	48	36.1	71	53.4	133	100
3	Teaching capacity of your lecturers	2	1.5	47	35.3	84	63.2	133	100
4	Curriculum/course content	11	8.3	58	43.6	64	48.1	133	100
5	Rules in the learner information guide	31	23.3	50	37.6	52	39.1	133	100
6	Involvement with academic staff	41	30.8	62	46.6	30	22.6	133	100
7	Involvement in class participation	13	9.8	75	56.4	45	33.8	133	100
8	Involvement with peers	16	12.0	52	39.1	65	48.9	133	100
9	Mentoring in the clinical placement areas	37	27.9	60	45.1	36	27.1	133	100
10	Extra - curricular opportunities e.g. sports, choir	83	62.4	34	25.6	16	12	133	100
11	Feedback about my performance	17	12.8	49	36.8	67	50.4	133	100
12	Opportunities for resumption to training	132	99.3	1.0	0.8	0.0	0.0	133	100

Student support

Many of the south students 47.3%,(n=63) expressed little satisfaction regarding *student support services*, as presented in Table 21, with 33.8% (n=45) indicating a moderate satisfaction level. Only 18.8% (n=25) had a great satisfaction level. A high proportion of

students seemed satisfied with *adequacy of books in the library and teaching aids*, with 39.8% (n=53) having a moderate satisfaction level and 36.8% (n=49) reporting great satisfaction. A few students 23.4% (n=31) reported little satisfaction. However, the majority of students 62.4% (n=83) reported little satisfaction *with recreation facilities on campus*, while 25.6% (n=34) reported having a moderate level of satisfaction. A small portion of students 12% (n=16) reported great satisfaction level.

Interestingly most students 64.7% (n=86) reported great satisfaction *with transport to clinical facilities for practical learning*, compared to only 20.3% (n=27) who were moderately satisfied and 15% (n=20) reported little satisfaction. Many students 39.1% (n=52) reported a moderate satisfaction level in regards to *accommodation for students* and a fairly large number of students 33.1% (n=44) reported little satisfaction. The other 27.8% (n=37) reported a great satisfaction level.

Table 21: Level of satisfaction in the programme: student support: south campus (n=113)

	Student support South campus	Little		Moderate		Great		Total	
		n	%	n	%	n	%	n	%
1	Student support services e.g. counselling, advising, mentoring	63	47.3	45	33.8	25	18.8	133	100
2	Adequacy of books in the library and teaching aids	31	23.4	53	39.8	49	36.8	133	100
3	Recreational facilities at the campus	83	62.4	34	25.6	16	12	133	100
4	Transport to clinical facilities for practical learning	20	15.0	27	20.3	86	64.7	133	100
5	Accommodation facilities for students	44	33.1	52	39.1	37	27.8	133	100

5.2.4.3 Similarities and differences in satisfaction levels between the northern (rural) and southern (urban) campuses (n=294)

When comparing the findings from the two campuses, it became evident that while some of the levels of satisfaction were much the same, there were also some that differed, which could have an impact on student dropout.

Using the student codes (AFN, APN, AFS and APS as discussed in previous chapter), the Mann Whitney U test and the Kruskal Wallis test were used to examine the differences in the satisfaction levels of students between the two campuses in relation to their study progress. The Kruskal Wallis test, according to Polit and Beck (2008) is used to test the difference between three or more independent groups based on ranked scores. The Kruskal Wallis test had an alpha score of 0.001, showing that there were differences in student satisfaction levels between the four student codes. The Mann Whitney test revealed that the satisfaction level was not the same for study progress between the students that were progressing well and those experiencing failure with an alpha of 0.014. It also showed that the distribution of satisfaction level was not the same between the northern and southern campuses, with an alpha score of 0.001. The following is a summarised comparison of the results between the northern and southern campuses (A detailed comparison of satisfaction levels is presented in Annexure 6.)

The majority of students in both campuses expressed little satisfaction with regard to *information about the college/campus prior to enrolment; extra-curricular activities; opportunities for resumption to training; student support services; and recreational facilities at the campus*. However, with regard to *involvement with academic staff and mentoring in the*

clinical placement areas, the majority of students in the northern campus reported little satisfaction, whereas the majority of those in the southern reported moderate satisfaction.

While findings showed that most the of students in both campuses were moderately satisfied *with the campus environment; involvement in class participation and involvement with peers*, it became evident that there were differences in how certain facilities were perceived between the two campuses. The majority of students in the northern campus expressed little satisfaction regarding *library resources and availability of transport and accommodation*, whereas the majority of those in the southern campus were moderately satisfied with these facilities.

Similarly, with *regard to contact with lecturers; teaching capacity of lecturers; curriculum and course content; rules in the learner information guide and feedback about performance*, the majority of students in the northern campus were moderately satisfied whereas the majority of those in the southern campus were greatly satisfied. Conversely, however, the majority of students in the northern campus were greatly satisfied *with information about nursing as a career; the recruitment and selection process; and the enrolment and integration process*, whereas the majority of those from the southern campus were only moderately satisfied. Lastly, the majority of students in both campuses indicated that they were greatly satisfied with *the orientation and induction processes*.

5.4 PART TWO: QUALITATIVE DATA RESULTS

This section presents the qualitative data that emerged from the focus group interviews conducted in each of the two units of analysis (northern and southern campuses). In total, there were four focus groups; two groups comprised of student participants who experienced academic failure, coded as (*AFN*) for students in the northern campus and (*AFS*) for the students in the southern campus; and two groups of senior academic staff including the

principals, coded as (*AS*) for academics in the southern campus and (*AN*) for academics in the northern campus. The cyclical or interactive model described in Miles and Huberman (1994) was used to analyze qualitative data. Saturation of data was obtained when no new information was elicited from the semi structured questions at the interviews.

The data was initially analysed in terms of the objectives of the study. Initial and final categories were generated by highlighting factors which influence student nurse attrition from the nursing programme. A number of conceptual themes emerged, which were regrouped according to the main phases of Tinto and Pusser (2006) Model of Institutional Action which was the conceptual framework used in this study.

The following themes emerged: (a) prior knowledge of nursing as a profession; (b) expectations of the course; (c) nursing career choice; (d) processes followed in the course of enrollment and integration into the programme; (e) student engagement; (f) student support mechanisms; and (g) recommendations to promote retention of students. Extracts are presented to support the themes, dimensions and properties. The data is triangulated to present a rich description of the problem of attrition from all participants. The data is presented under the main headings of the conceptual framework and the themes which emerged.

5.4.1 Pre-enrollment factors

The responses of nursing students on their expectations before coming to the course revealed various factors linking pre-enrolment to student attrition. Four themes emerged that are relevant to this phase; (a) prior knowledge of nursing as a profession; (b) expectations of the course; (c) nursing as a career choice; (d) and processes followed in the course of enrollment and integration into the programme.

5.4.1.1 Prior knowledge of nursing as a profession

The findings showed that this theme had two properties; (a) having been well informed about nursing as a profession; and (b) limited knowledge or incorrect perceptions of the nursing profession. It emerged from the data that some of the participants had been well informed about nursing as a profession and had known that it is a profession with both theory and practical components. Some of the participants had learnt about the nursing profession from family members or those close to them, as stated in these extracts:

“My aunt is a nurse so she told me some of the things that are done.” [AFN]

“I had an idea what the course was about because I knew people who were already doing the course so they told me that the studying is like this” ... [AFS]

“I knew that theoretical work and practical work are related.” [AFS]

It became evident that some of the participants had not been well informed about nursing before they had commenced the course and had assumed that nursing was not as academically challenging as other academic qualifications. They thought it was about helping people and had not realized that it involved learning the theory underpinning practice. Some had not even had a basic understanding that nursing involved theory and practical, which are both equally important. They had perceived nursing as skills focused training with minimal or no theory and had assumed that they would be placed in hospital settings for hands on learning on how to become a nurse, as reflected in these extracts:

“I thought nursing was that much easy, I did not think of nursing being so academically challenging” ... [AFN]

“I came into the course knowing that it will be a 4 year course, but honestly I did not think that we will actually sit down in a class and be lectured and write examinations, I just thought that we will be placed in the wards and the Sisters will show us how to do things and then we take it from there” ... [AFS]

“I didn’t have much knowledge about what actually goes on in the nursing field” ... [AFS]

5.4.1.2 Expectations of the course

Data sources revealed a link between students’ prior knowledge about nursing as a profession and the expectations they had held when they were accepted to the programme. It became evident that some had more realistic expectations than others and those with realistic expectations were mainly from the group that had been well informed about nursing as a profession.

“I knew that a certain level of knowledge is required and some practical skills” ... [AFS]

“I knew studying was involved.....theoretical and practical work is related.” [AFS]

The findings showed that those who had limited knowledge about nursing had held unrealistic expectations. Believing that nursing is skills oriented, they had expected a programme which would teach them the skills they needed to provide care, such as administering injections and checking blood pressure. They had not expected an intensive studying programme or having to read so many books.

“I actually expected just the training and I was not aware of the theory.” [AFS]

“I was shocked; I didn’t think there was so much studying. ----- (giggle from another student), so much of books, the studying, examination---- everything---- it really shocked me.” [AFN]

“I was expecting that we are going to give injections, taking blood pressure and be taught how to dress wounds.” [AFS]

5.4.1.3 Nursing as a career choice

Participants were required to provide reasons for choosing nursing as a career. Most of them indicated that the nursing profession had not been their first career choice. A number of properties emerged from this theme including (a) passion for nursing, (b) career/job security, (c) financial reasons, (d) altruism/ service orientation, (e) parents' career choice and family influence and (g) previous exposure to nursing.

Passion for nursing: A number of participants cited passion for nursing as their reason for choosing nursing as a career. They indicated that they had always wanted to be a nurse and that their love for nursing had started at an early stage in life. Some indicated that they felt that nursing was their calling; it was what they were born to do; they were nurses by nature; it was their dream; it was their first choice in life.

"It was my choice, I love nursing." [AFS]

"I always wanted to be a nurse." [AFS]

"I always had interest in nursing profession." [AFN]

"It was my dream career since I was young." [AFN]

Career/job security Some participants stated that they had not been able to find work after completing their tertiary studies and had then considered nursing as a second, some had not been happy in their first career choices and they had therefore changed to nursing and some stated that they needed a stable career. However, for some, it was their career of choice. Some of the participants explained that although it had not been their first choice, they had developed a passion for nursing once they were in it and others indicated that is a fulfilling career that pays for itself.

"I could not find a job after completing a diploma in biotechnology." [AFS]

“I needed a stable secure career.” [AFN]

“I also did not produce amazing results whilst at university and changed to nursing.” [AFN]

Some of the participants explained that a South African nursing qualification is internationally recognised and therefore opened opportunities for them to secure jobs overseas.

“Nursing is an internationally recognised qualification.” [AFS]

“Nurses are in demand overseas”... [AFS]

The participants mentioned what their first career choices had been and these included accountancy, engineering, medicine, law, psychology, social work, journalism, art and tourism, teaching, navigation, pharmacy, pilot and dental technician.

Financial reasons: It emerged from data sources that some of the participants had chosen nursing for financial reasons. Some had started other careers, but could not finish due to lack of funds or financial difficulties. Others had no one to help them financially as there had been no source of income in the family as a result of the death of a parent. Participants explained that nursing was attractive because they get paid while they are students, which helps them to support their families.

“My father died and I had no one to help me...and support my family.” [AFN]

“I had financial difficulties... I applied because I get paid while I am studying.” [AFS]

“Honestly, it wasn't my first choice because I was studying somewhere... I couldn't finish because of financial problems.” [AFN]

Altruism/Service orientation: The helping nature and service orientation of the nursing profession was cited as one of the reasons for choosing nursing as a career. Some of the participants were driven by the desire of wanting to make a difference in other people's lives,

to assist them in dealing with their health issues without expecting anything back. Some said that they get emotional satisfaction from helping others and from nurturing those that are helpless and see them get better. They did not like seeing people suffer and loved the idea of helping others. These sentiments are expressed in the following extracts

“Help patients and see them getting better.” [AFS]

“To help those who cannot help themselves.” [AFN]

“Helping human beings satisfy me emotionally.” [AFS]

“for me it was not my choice, it was my second choice.....and when I got to the wards I think not even getting paid is as gratifying as someone saying “thank you, god bless you”. Just touching peoples’ lives has changed me a lot” [AFN]

Parents’ career choice or family influence: The findings revealed that some of the participants were motivated by parents who are nurses who wanted their children to become nurses too; some said they had relatives who were nurses who had stimulated their interest in helping people by telling them about caring for patients; and some saw their nursing siblings, friends and significant others as role models and felt proud to join them in the profession.

“My mother wanted me to be a nurse.” [AFN]

“Nursing was my second choice... My mother told me to apply for nursing and I applied..... now it got me into something good.” [AFS]

“My pastor was a nurse and he inspired me.” [AFN]

Previous exposure to nursing: It emerged from the data that some of the participants had developed their interest in nursing because of previous exposure to nursing; either as patients, taking care of sick family members or becoming aware of the quality of care provided to hospitalised family members. Some developed an interest in nursing because they were working in health care settings as part of support/administrative staff. Others had family members who were nurses.

“I took care of my mum who was sick and I was depressed because I did not have good knowledge of nursing a sick person”.... [AFN]

“I used to nurse my late father, changing his soiled bed and feeding him”... [AFN]

“Nursing care that was given to me in hospital when I was sick inspired me.” [AFS]

5.4.1.4 Processes followed in the course of enrollment and integration into the programme

The dimensions that emerged for this theme included (a) marketing strategy for the programme; (b) recruitment, selection and admission to the programme; and (c) orientation and integration to the programme.

Marketing strategy: The findings revealed that although open days are held to attract suitable candidates to the nursing profession; these are not formalized or standardized across all the campuses. One academic participant stressed that in instances where school children have been invited to the hospital as a marketing strategy, this has been arranged by the public relations officer of the hospital and not by the college. Other academic participants stated that the college and campuses have no clear marketing strategy for the programmes they offered. One of the academic participants mentioned that school principals used to invite them to address school pupils, but that this has not happened recently. The following abstracts explain:

“We have open days that are linked to the hospital open days..... Several schools were invited and we addressed the students and I found the nursing campus stand very popular amongst high school students....., this is arranged by the public relations officer of the hospital.” [AS]

“We did it once, we identified some high schools around and we went there and did some marketing...that was five years ago... we don't do it anymore.” [AN]

“No nothing formal for marketing, if the advert is out some of us take it to our churches and it's informal.” [AN]

Academic participants suggested that because many of the applicants who come to nursing know little about the profession, open days should be held at all campuses where potential students can find out all about the profession and what is expected of nurses, so that they know what to expect when they enroll. They suggested that open days should include a hospital tour so prospective students can formulate an impression of the hospital environment. Participants also suggested that information booklets should be available to potential students, as stated in the following excerpts:

... “Students apply in numbers... we are not able to get students who want to do nursing; the ones we attract are those who want to get money.” [AN]

“So to prevent attrition..... have open days where we can tell them what is expected of nurses... by the time they come here at least they know.....what is expected of them.” [AN]

Recruitment and selection to the programme: Centralized recruitment and selection emerged as a dimension of the enrollment and admission processes. Findings revealed that an annual advertisement inviting applicants to enroll for the programme is placed in local newspapers and on the KwaZulu-Natal Department of Health website by the head office of the College of Nursing. Potential candidates are invited to submit their applications to the district closest to where they live. The following abstracts explain:

“We don’t recruit as such..... it appears in the local newspapers throughout the province” [AS]

“I have seen something there ... intranet KZNCN, which is advertising the nurse training” ... [AS]

Participants explained that the process of student recruitment and selection was managed by the District Central Selection Committees at college level, but that the logistic processes were done by the campuses at institutional level. Some of the academic participants felt that if the recruitment system was more transparent and was carried out at campus level, it would be

more effective in terms of selecting the best candidates. There would therefore be a better chance of them completing the programme.

Some academic participants indicated that they were not happy with the current selection criteria. They stated that many of the school children who would be good candidates for nursing do not qualify because they had not studied mathematics or physical science at the required level according to the selection policy. One participant felt that the pass level of mathematics and physical science should be reduced because learners in some high schools, especially in remote areas, are not doing very well in these subjects thus reducing their chances of gaining admission to programmes such as these. Another participant, who was a subject lecturer, pointed out that those students who had studied the right subjects at school did not necessarily perform better than those who had not done those subjects. The following excerpts explain the views of academic participants:

“I’m looking at the subjects..... I’m very much worried about mathematics..... because we know our learners at the high schools..... they are not doing very well in mathematics..... there are a lot of these good students who do not have mathematics therefore do not make it in our selection program” ... [AN]

“When having a look at the subjects... I would ask maybe to look for learners who got the subjects.....but don’t ask this level 3 or 4... I think it’s too high for a level” [AN]

The subject of pre-employment medical examinations came under discussion and it became evident that such examinations were not a standardized policy of the college. Academics in the northern campus stated that although pre-employment medical examinations were undertaken, they indicated that such examinations were not an exclusion criterion, but were done to identify those who might need medical assistance whilst accommodated in the programme. They did mention that students who were found to be pregnant were deferred to the next round of admission to the programme. One of the academics in the southern campus

stated that although pre-employment medical examinations had been proposed, they had not as yet been implemented.

“They are taken for medical examination some are diagnosed and initiated treatment... and some are even put on sick leave... others are even booked for two weeks leave before they can start training”...[AN]

“Some are found pregnant..... they don't even start the courses.....their appointment is postponed to the next group”... [AN]

Interviews and written tests emerged as another dimension of the selection process. Academic participants mentioned that interviews and written tests were conducted as part of the selection process to assess the language competency of prospective students and to give them information about the programme. It became evident, however, that these were not standardized throughout the different campuses of the College of Nursing as the southern campus does simple verbal questioning to assess basic communication skills while the northern campus performs both verbal questions and a simple written test to assess prospective students' command of the English language.

“Basically it is both written and verbal and they have structured questions which they have to answer”... [AN]

“We ask them questions in a panel..... we ask them simple questions like, tell us about yourself”, and ask them if they know anything about nursing..... and why do they want to become nurses”... [AS]

The bursary system emerged as a property that influenced recruitment of students into the programme. When discussing how the recruitment process impacts on performance, attrition and success of students, academic participants indicated that they were not happy with the current recruitment strategy used by the college, whereby nursing students are given a bursary to study, as they felt that students were attracted to the nursing profession for financial reasons rather than as a vocation. Data sources revealed that nursing students do not

pay any tuition fees and that their education and training is subsidized by the health department. Some of the participants pointed out the following:

“I don’t know if it’s a type of recruitmentor what because nursing is a programme where there is a sure case of bursary..... We get people who are unemployed and who need to be employed”... [AS]

“because they would get a pay.... and so they will come for training...not interested in nursing”... [AN]

.... “maybe if it didn’t have a specific score we would get the appropriate nurses... people whom are really committed to come and nurse other than looking at the pass mark or score”...[AN]

Orientation and induction to the programme emerged as an important dimension relating to integration into the programme. A week of in-depth orientation and induction follows the enrollment process to ease students into the programme, thus promoting retention. Two properties emerged with regard to orientation: (a) the views of academic personnel; and (b) the views of student participants. Academic participants indicated that the orientation process is extensive and is a time when students learn as much as they can about the physical layout of the campus, the hospital and the college structure. Various people come and inform them about duty hours, uniforms, the etiquette of nursing and other details of the nursing programme, including the theory and clinical aspects, the different subjects, student rules and regulations, clinical placements and about patients. The bursary contract and the implications thereof, community service and service obligation on completion of training are all explained as part of the induction process.

“There is a lot that happens during enrollment and orientation..... Human Resource will be here, the Nursing Manager will be here to meet the students, the class Tutors, the subject Tutors, the Principal, the Registrar..... Occupational Health and Safety also comes”..... [AS]

.... *“and we also explain to them that there will be a bursary contract to sign..... and if they breach the contract implications are attached..... inform them about the rules, regulations”..... [AN]*

“We tell them about the theory..... tell them about different clinical placements in hospital wards and clinics... tell them they will see different patients that are well and the one who are not well... patients that are dying or about to die.”[AS]

..... *“they are channelled to social worker for financial support and psychologist for personal support..... they are made aware of the wellness clinic” ... [AS]*

Student participants, however, gave their perspective of the orientation process. They indicated that they had expected more information about the nursing aspect than they had received, which could be a factor in attrition from the programme. They felt that there had been more focus on the study aspect than on nursing. They reported that they had wanted to know more about what goes on in the clinical side of nursing, about patients and their illnesses, and about death and dying. They felt anxious and wondered if they made the correct choice. Some of the following excerpts highlight their feelings:

..... *“I think orientation is not enough....some things you find along the way.... You find yourself in level two....and thinking nursing, no, is not my profession.” [AFN]*

.... *“sometimes we got a fright when it got to learning stuffand how to learn and we started worrying if we will ever finish the course” ... [AFS]*

“The people that come here are young like me; I had never seen a sick person and I weren't told that people are “thaaat” sick. The first day I went to work in the wards... a child dies in front of my eyes..... and I had never seen anyone die..... They don't tell us exactly what goes on down there; they expect us not to be affected by all of this.” [AFS]

5.4.2 Institutional engagement

Several dimensions emerged in the theme of student engagement, which is linked to attrition. The views of student and academic participants are presented simultaneously in this discussion to provide a thick and rich description of all the dimensions during student

engagement. The dimensions are interlinked and include: (a) perceptions of the college curriculum; (b) examination procedures and policies; (c) student engagement and involvement; (d) clinical learning; (e) factors that lead to poor progress or dropout; (f) student support mechanisms; and (g) monitoring, feedback and assessment.

5.4.2.1 Perceptions of college curriculum

The properties that emerged in this dimension included views on curriculum overload, and the courses and subjects that influenced dropout. In terms of curriculum structure, participants expressed reservations about the timing and duration of some of the subjects, which may be linked to poor performance and attrition.

Participants suggested that it would be better to do Psychiatric Nursing Science earlier in the programme and Midwifery as the final module in the four year programme as they felt that students would be better skilled to manage mothers and their newborn. The academics were of the opinion that the programme was too intense and that students did not cope that well with the amount of workload. They said students found the six month period allocated to the Midwifery course challenging and recommended that it be done over a year. They also recommended that Anatomy and Physiology (A&P) be done over two years. Anatomy and Physiology and Midwifery were cited as the subjects that were most often failed. Some of the excerpts were:

.... "the reality is that the workload is too much" [AFN]

"I would put Midwifery as the last module instead of Psychiatry... You can see the results are not so good... and given the tasks like the birth of a baby, it is demanding... it's better to do Midwifery last after getting Psych skills" ... [AS]

"I have noticed that students don't perform well in Midwifery..... they do a lot in a period of just six months..... time factor is a challenge." [AN]

“If perhaps A&P was done over two years reminds me of the old curriculum where firstly they did Anatomy the whole year and Physiology the following year.” [AN]

Unfamiliar and difficult concepts also emerged as a dimension that influenced attrition. It became evident from students’ responses during the interviews and from the questionnaires that students found A&P and Midwifery the most difficult and challenging subjects. They said that A&P was difficult to understand, they found the terminology difficult, there was too much to grasp and learn in a short space of time, which they found particularly challenging as they had not learnt study techniques. Furthermore, some students said they had not done Biology at school so memorized everything without really understanding it. Below are some of their responses.

“A&P very difficult, it is too deep like you studying to be a doctor, examination questions not straight to the point” [AFN]

“A&P it was the terminology.” (came up frequently)..... [AFN]

“Terminology is confusing.” [AFS]

“A&P had to regurgitate book and unfortunately I can’t ... you need to know everything from head to toe, including bones, by names.” [AFS]

The duration of the Midwifery course came up repeatedly by all participants. Participants stated that the time for the course was too short, they had problems with the terminology, the theory was difficult to understand, and there was too much to do in too little time. This is what participants had to say about midwifery:

“The theory part is a lot different.....terminology difficult to grasp.”[AFS]

... “Midwifery difficult to understand and lots of work in little time” [AFN]

... “short period to complete requirements ... terminology difficult to grasp.” [AFN]

... “Midwifery time given is too short, only six months and in this time we have to learn theory, go to clinical area and complete requirements” [AFS]

5.4.2.2 Examination procedures and policies

Duly performed (DP) requirements and supplementary examinations emerged as major dimensions of examination procedures and policies. Participants had different views regarding examination rules. Some felt the rules were restrictive and disadvantageous to students, whereas others felt that they were reasonable. Academic participants indicated that there are clear rules on examination processes, but expressed a number of concerns. These included the DP system, the lack of supplementary examinations, and the demotions and termination rules. In order to qualify for entry to examinations, the DP system of the college requires students to pass all the tests, assignments and projects with an average of 50%. The participants explained that the DP mark only serves as an entry to the examination, but does not contribute to the final marks, much to the dissatisfaction of students as stated in the following excerpt;

“DP is used only as an entry to examinations... maybe if a percentage was used towards examination marks it will help learners to pass, maybe 50% from DP marks and 50% from examination marks be better”[AN]

The reason for not using DP marks towards the final marks was explained during the interview with the Principal of the southern campus, who had many years of experience in this college of nursing. It emerged that DP marks had been used towards final marks at some stage, but this had been done away with because there was no uniformity in these evaluations since they were set at campus level and not at college level. The standard was therefore not the same across the ten campuses, resulting in some students being advantaged and others disadvantaged.

..... “we did away with the DP because of the lack of uniformity with the standards..... we were saying that if the DP test were set from KZNCN at least we will all know that the students wrote the same DP test other students were advantaged when they entered the examination room with a high DP.” [AS]

Student participants stated that they have to write two tests to get a DP. Should they not get the DP, they cannot write the examination and it is counted as a first failure. They then have only one chance left to write the examination and if they fail that examination they are terminated from the programme. Academic participants suggested that students who did not get the DP through the first two tests should be given an opportunity to write another test to get the DP instead of having to repeat the six months, which results in extended training time and risk of attrition. Students expressed the same recommendation of an additional test.

“We have to write two DP tests... should you not meet the minimum requirements, you don't write examination” ... [AFN]

“if students fail to get the DP after the 2 summative tests they not allowed to write another test..... and have to drop a whole module..... whereas if given a chance to do another test to get the DP they would enter the examination.” (supported by group).... [AS]

..... “I feel like there must be another second chance for a test” [AFN]

.... “Sometimes students are sick and don't get the DP and others don't write the examination because of sickness... then they are demoted.... and counted as failed” [AFN]

Participants expressed concern that supplementary examinations were not included in the college examination policy. They suggested that if students failing with 47% or 48% had the benefit of a supplementary examination, they would have a chance of completing the programme within the prescribed time.

..... “if you fail with 48%, you have to wait for 6 months to write again, where else.....we could write supplementary examinations....., unlike waiting for 6 months” ...[AFS]

“I think it would be better if we get supplementary examination..... because most of the students are failing let's say in third year they failed with a 47% or 48 %”... [AFN]

Participants commented that supplementary examinations would give students a chance to succeed if they had a crisis in their lives during examination times.

.....” Some students have crisis in their lives when they write the examination and maybe if they could be given an opportunity to write supplementary examination they could succeed” [AS]

Student participants, in particular, expressed that it seemed unfair to have to repeat a semester for a period of six months after only one examination failure and that dropping a group should be the last resort.

“Dropping a group after one examination is unfair... You fail once and you expected to drop for six months... that’s why we say we want supplementary examinations”... [AFN]

“We have to stay for six months in the wards... then come back to write examinations and those hours is not like they are hours we are owing, it’s just like working extra hours”.....[AFN]

“We need to have supplementary examinations in place... not just drop for one examination and out you go... dropping a group should be the last resort”... [AFS]

It emerged that students can write a supplementary examination if they fail only one portion of the Psychiatry examination, (this being the final examination in the programme) but not for any other course or subject. They recommended that supplementary examinations should apply to all subjects within the programme. Participants stated that the lack of supplementary examinations results in loss of training time, which directly results in attrition from the programme.

..... “there is only one supplementary examination for Psychiatry paper, they come back to write six weeks after the examination” [AS]

“All the papers should have a supplementary examination.”[AS]

“Supplementary examinations will also assist because they have to dropout at the end of 5 years” [AS]

On the dimension of resumption/return to training it emerged that the college does not have a policy on *the resumption or return to training* after being excluded from the programme. It became evident that students are excluded from the programme after two unsuccessful attempts. They stated although there is a policy to write an examination for the third time upon application to the college as an independent candidate, referred to as a private/direct entry, they are not taken back to resume training even if the result is successful.

“No you don’t come back to training.... after a private entry”... [AFS]

..... “private entry is not going to change anything because passing a private entry does not make you qualify to continue with the course”... [AN]

..... “It’s not right, I know of a 3rd year student who wrote Ethos and Professional Practice examination as a private entry and he passed..... he could not come back to the course” [AN]

The college offers an additional year of training (four years plus one year), making a maximum of five years. If students do not make it within this time, they are excluded, irrespective of the level of training. It was also mentioned that students who drop out of the programme for personal reasons are not taken back.

“After five years, students are terminated even if the course is not completed” [AN]

..... “these students have nearly completed their training and should be given a chance to finish”. [AS]

“I wish there could be other opportunities of resumption of training as well... because there are those that just left..... there was this learner who had a needle stick injury and was tested HIV positive..... she was devastated and just became ill immediately... and left”...[AFN]

Academic participants suggested that finalist students should be given an opportunity to become independent learners (without a bursary) after the five years, thereby giving them the opportunity to complete the programme.

“My opinion is that if a learner has completed five years, they can be made independent students especially at fourth year” [AS]

5.4.2.3 Student engagement and involvement

The properties that emerged in the dimension of student engagement and involvement which had a link to student attrition and retention included: (a) teaching and learning methodologies; (b) library resources; (c) study skills and habits; and (d) extracurricular activities

Teaching and learning methodology: Academic participants outlined methods that they use to engage students in the classroom, such as case studies, role plays, case presentations and mini research projects. They reported that students enjoy student-led discussions so therefore use teaching methodologies that are interactive and engage students in the learning process.

Students relate much better with peers, as mentioned below:

“We give them case studies and specific conditions when they are in the wards..... when they do come back they do role plays and case presentations... they enjoy this”. [AS]

“Yes, they are involved with class... they do presentation... conduct mini research projects” [AS]

However, some of the student participants stated that their lecturers’ teaching styles were not up to their expectations; that the lectures could be made more interesting; and that there is too much information and not enough time to digest it all. Some of the students did, however, commend the educators.

“I wish it could be more interesting, honestly, like for me Community Nursing Sciences are long and boring... I would love overhead projector so we can see... if you see something it helps” [AFN]

“Some of them are very good... but some of them are just not getting the information into our heads” [AFN]

Library resources: It became evident from the findings that participants in the northern campus were unhappy with the campus library facilities. The students complained that the library was not well-resourced in that they could not access reference sources; books were out dated and some of the recommended readings were not available. Furthermore, there was only one computer, which was used by the librarian and no access to internet to search for latest information.

..... *“our library was having out dated books; you could see the dust on it.”*
[AFN]

“We are forced to buy the recommended books brand new.....and they tell us it is out of print and there is only one available in the principal’s office” ... [AFN]

..... *“there was a library before the construction and it was full of journals, medical books and not much nursing books.”* [AFN]

“We don’t have much access to internet in the library... There is only one computer in the library which is used by the librarian. We have to ask the librarian to search for you” [AFN]

Academics of the northern campus confirmed that the library did need improvement with respect to resources and space. They also mentioned that their students tended to share books rather than buy them, which was not conducive to study practices. The researcher noted that the library was under renovation at the time of data collection.

..... *“Yes when it comes to that it is a big problem, students do not have the culture of buying booksso now I am enforcing that culture, they even told me they did not buy books, they used to share books”....* [AN]

The students said the library was only open from 0700hrs to 1600hrs, which hindered their learning as they were either working in the wards or having classes during those times. They suggested that the library hours be extended to after hours and weekends. Academic participants supported the suggestion that the library could close around 1900hrs, especially for those living outside the hospital where study conditions are not so good.

“If they could close the library a little bit late.... around 22h00 and not at 16h00”... [AFS]

..... “from an academic point, seeing they are staying in an outside environment where study conditions not sure how it is, a controlled library after hours will do”..... [AN]

Findings showed that the library in the southern campus had better resources. Participants explained that the library is situated in the hospital and is used by both the campus and hospital. There is a full time librarian who orders reading material using a budget from the hospital and the campus and it is therefore well stocked with nursing and medical journals. Student participants suggested, however, that it would help them if the library remained open until 22h00. This concept was supported by the academic participants. Below are excerpts from participants in the southern campus.

..... “yes we have a library at the hospital, a librarian that is employed by the hospital, the librarian every year request for a list of books that he can order to be kept at the library, and then the campus budget we use to pay for nursing journals, hospital budget pays for medical journals”..... [AS]

.... “another factor is the library, the library here is open up to 4pm, and therefore students who would love to come to the library after this time cannot do so. It is a hospital library; there is no library for the campus”.... [AS]

“If they could close the library a little bit late, around 22h00 and not at 16h00”.... [AFS]

Study habits, study skills and multiple roles: One of the findings that emerged from the study was that students experience difficulty in finding enough time to study. Participants indicated that they find it particularly difficult when they are in the clinical facilities, as they are tired after the long hours they put in the ward routine. They also mentioned that they have other responsibilities, such as household chores, and being a parent or a spouse. One student mentioned that he is a slow learner and needs time to catch up, but gets very tired from the busy wards in which he works and this affects his progress. Participants also explained that most of the students lack study skills, and would appreciate some support from the college in

developing such skills. They suggested that students need to be taught how to study and how to manage their workload in conjunction with their personal life. The following are excerpts from participants;

“I find studying easier when we are at campus than when we are at the wards because as my colleague said when we are at the wards you easily get tired especially after 7/7 shift... when you get home at night you are exhausted so I prefer studying after college”. [AFS]

“I cannot study in my own time because really I have to be a mother, a wife to somebody so really the time is not enough” ... [AFS]

“Students lack study skills and unfortunate for us we don’t have somebody who goes around the college teaching students how to study..... because they need to be taught how you study, how you manage the load of work in front of you with your own personal life”. [AS]

However, one of the students said some students fail because they are lazy and do not take enough time to study. Academic staff suggested that they sometimes suffer academically because they are young or their social life becomes a priority.

..... “I would think, sometimes it can just be students’ laziness, not taking enough time to study, then they fail” [AFN]

..... “Maybe because they are also young, they are too busy socializing, sometimes they tell you that they also have a social lifebut they have to look at the priorities” ... [AS]

Student accommodation emerged as a major dimension which influenced student learning and academic progress. Data sources revealed that the traditional nurse’s home has been done away with and that there was limited accommodation available in staff residence facilities. Those that lived in the residence reported that the noise made by others made it difficult to concentrate and disrupted their studies. Those that rented private accommodation explained that due to costs, some had to share rooms with other students, which was not conducive to study.

“If the nurse’s home could be divided, one side for students and the other for qualified staff... those qualified staff doesn’t care... If you have an examination the following day, they make a noise... they can stay up till 4am in the morning.” [AFN]

“Conditions must be conducive to learning... provision of proper residential facilities for all learners”... [AN]

“For us, we share a four-roomed house... some days no water... cook in the bedroom... whatever you have to do, you do it there ... no electricity”...[AFN]

Extra-curricular activities: Extra-curricular activities as a property of institutional engagement have a link to student integration and involvement as these positively promote student participation and successful outcomes. Findings revealed that as part of recreation the students engage in various extra-curricular activities, such as netball, soccer, intercampus sports days, culture days, chapel prayer meetings and parties. Such activities encourage students to make friends with each other, which in turn helps with peer support. Student participants, however, highlighted that more could be done to promote recreation.

Participants said:

“We do have sports, netball and soccer team, a tennis court..... we did have a debate which sort of vanished, we do have a choir”...[AS]

.... “Yes, they are playing soccer and netball. They have tournaments with other campuses in the north and they have that trophy over there [points to it] ... so our students are champions”..... [AN]

..... “Sports are not linked to the college programme... we feel time should be provided for extracurricular activities.” [AFN]

5.4.2.4 Clinical learning

Clinical learning emerged is an important dimension linked to student engagement and is a factor that contributes to student attrition. Student participants from both campuses shared that while they were expected to carry the workload in the wards, they receive limited support and mentoring from the staff. They acknowledged that some of the clinical staff are totally

dedicated, but said there are others who are not as committed and who do not respond to their requests for help. Some participants felt that staff shy away from helping them or brush them off saying they do not have time to teach, or will do so on another day because they lack teaching skills. They acknowledge the clinical accompaniment done by lecturing staff when they were available in the clinical facilities and said that they had received good feedback from them. They also conceded that the lack of teaching time in the clinical settings may be due to staff shortages. The following abstracts explain:

“My experience is that maybe just one or two wards where we find the staff very dedicated to teach students” ... [AFS]

..... “when there are teachable moments you go to the sisters and you ask them “what is the problem with this patient” they look at you and tell you “I don’t have time to teach you, maybe another day”[AFN]

“Support in the clinical area is not that good... they are short staffed... they let us carry the wards... they depend on us... We are the ones that are left behind they call you for this and for that..... you can’t find time to do anything in the wards” [AFS]

5.4.2.5 Factors that lead to poor progress or dropout

Several properties emerged under this dimension linked to student nurse attrition. These are grouped as (a) academic factors; (b) health and illness; (c) personal and social factors; (d) financial factors; (e) background education; and (f) educational resources.

The views of student participants and academic staff participants are discussed simultaneously in order to present a comprehensive view of related factors.

Academic factors: Student participants highlighted various academic factors that could lead to attrition. These included lack of supplementary examinations, poor spacing of examinations and lack of study leave at examination times, not enough time to cover the volume of work, modules of short duration and the difficult medical/nursing terminology. They also mentioned the huge volume of work contained in the subject, Fundamental Nursing

Science, where related content such as first aid, nutrition and microbiology were all included in the examination. They stated that although plenty of time had been allocated to clinical procedures that were carried out in the wards, very little time was given to do the same procedure in the Objective Structured Clinical Examination (OSCE), often resulting in failure. Other academic factors that emerged included language barriers; the way the examination questions are set and the strictness of the rule book.

Student participants reiterated that the course is generally difficult, there was not enough time to cover all the content they needed to know and the pressure of constantly being reminded that they have to pass. The following are some excerpts from student participants:

“I think it is the terminologywe just been introduced to nursing and immediately the first lecturer that comes in class will be telling you of these huge words that I never heard..... from the medullas and the what... what in the brain... I remember the strain I even lost weight, that’s how badly I took it”... [AFN]

“The course itself is challenging... you like it..... you written everything that is wanted therebut agh! (sense of frustration) when the results come out there is a surprise”... [AFN]

... “I had done Biology in high school but I really found A&P very difficult.... I questioned myself am I becoming a doctor or a nurse” (laughter) [AFN]

“Midwifery is heavy workload that we cover over a short period of time and the requirements of the register and practicals... it’s just too much” [AFS]

Academic participants concurred that certain subjects were notoriously difficult and possibly contributed to the high level of dropout. Participants agreed that Anatomy and Physiology are challenging subjects, as are Midwifery, Ethos and Professional Practice, and Psychiatric Nursing Science. Academics also agreed that time allocated to some of the modules for subjects such as A&P and Midwifery was just not enough for students to conceptualise all the information. They suggested that students might dropout because they found the course too intense to cover in the available time, they found the medical terminology problematic or

they may experience difficulty in adjusting to the heavy workload. The following are some excerpts from academic staff:

“A&P is challenging subject for learners..... the semester is too short for them to write an examination... students should be given a chance to do it over a whole year” [AN].

..... “the first semester adjustment, orientation, then A&P, DPs then they go to the wards come back to finish the syllabus, then write examinations and pass or fail”... [AS]

“Midwifery ... others just don’t like it; they feel it is a package and if they had a choice they would remove it” [AN]

Language challenges emerged as another property that contributed to poor progress. Participants mentioned that the prescribed books are mainly published outside South Africa and that they found the language used a bit challenging. They also stated that the level of English at their schools had not been good so they experienced difficulty in expressing themselves. They expressed that the terms and concepts were very difficult to pronounce and that they needed to use a dictionary all the time to understand meanings of words. Academic participants acknowledged that language could be a barrier to learning and that although English is taught in the schools, it was a second language for many of the students.

“Most of us come from rural schools and we were not exposed to good English..... so when we write the wrong spelling we get penalised for that”... [AFN]

“It’s those books; most of the time it is not written here in South Arica... I find it difficult, I need a dictionary all the time to understand the meaning” ... [AFS]

“I think it could be language barriers, English could be a foreign language.....a learner would sometimes say “mam can you explain in the vernacular,” “can you just translate this English book for me”[AN]

The quality of examinations emerged as another property as to why students failed to progress. Student participants highlighted that why they had failed some of the subjects was

because of *the way questions are set*. They said that although they prepare extensively for examinations and know their work, they do not do well or fail the paper. They suggested the reasons could be the way in which the questions are structured. They said they find multiple choice questions difficult as well as structured questions in Anatomy and Physiology, which have to be explained exactly as in the book.

“Community nursing science... sometimes you just don’t know what is being asked there. The MCQs are terrible..... the way they ask questions they make sure at the end by the time you finished reading the questions you are completely confused” ...[AFN].

“A&P is tricky the way they set the papers like 50% MCQ and 50% structured..... person is new to the course it’s hard because with the structured you have to write exactly what is in the book it’s kind of difficult for the student.” [AFN]

Health and illness: It became evident from the findings that students felt that prolonged illness was associated with poor academic progress, which could therefore result in extended training and attrition. Academic participants stated that illness causes students to lose concentration. They added that they generally do not disclose their illness, but become withdrawn. They do not progress well and treatment makes them drowsy in class. One participant said that a student had once come forward and disclosed his illness, but had regretted doing so because he was so affected by the stigma. Sometimes students come in with health problems, which are identified through the pre-employment medical routine and others contract illnesses like TB while working with patients. Below are some excerpts from participants:

“The problem with the students is the sickness; some do not finish the course because they are so sick... They pick-up illness in the ward and end up dying” ... [AFN]

“Sometimes you work in the medical ward and you get TB.....you have to drop the semester and that’s another stress” ... [AFN]

“Lots of them are sick themselves and so they cannot concentrate... they don’t disclose to anyone that they are sick... they just battle on their own they can’t study”..... [AN]

Personal and social problems: Participants highlighted some of the challenges that they experienced, one of them being maternity leave. It was revealed that if students fall pregnant, they are obliged to take maternity leave, which entails dropping to a lower level on their return. Furthermore, the bursary payment is withheld for the duration of maternity leave. Student participants felt the maternity leave was too long and that it should not be compulsory, while academics felt that maternity leave was important for the mother and baby’s welfare. Excerpts from participants:

“Having to take maternity leave even though you are doing well academically... personal issues like maternity leave should be your choice... when to take it and when not to”...[AFN]

“I had to take leave for a period of four months... I had to drop to another group.” [AFS].

“They need to go for maternity leave because if not... then they will have eight babies... The policy is okay as it is... demotion is okay”... [AN]

Social pressures were identified as another dimension that had an impact on students’ progress. These included issues of alcohol and substance use and absenteeism. Academics mentioned that some learners are regularly absent, which they attributed to financial problems or substance abuse. It emerged that some students drink too much alcohol and end up not doing well. Participants stated that alcohol and drugs are on top of the list of substance abuse and that in every cohort of students, there are one or two students who drink or take drugs, both of which are readily available near the campuses. Another participant suggested that students stray from their studies as they have both money and freedom for the first time in their lives. Excerpts from academics:

“Some are just troublesome... you find that absenteeism usually goes with something... some might have a financial problem around it or substance abuse”... [AS]

“The environment we have here as a campus..... when you step out of the gate; there are more than five places of shebeens.” [taverns where alcohol is sold]... [AN]

.... “I have four students that are attending Employee Assistance Programme (EAP) right now and one of them already gone to the rehabilitation centre so this really impact on their progress.” [AN]

Findings revealed that while students are simply not committed, others come from problematic backgrounds, where there are social problems such as no parents at home or ill parents or not enough money to buy food.

“Some are having family responsibility at home... parents and children to look after..... not enough money to buy food” [AN]

“Others are not committed students who failed in large numbers I have interviewed them...: I did not commit myself.... So they are not committed” [AN]

Financial problems: Participants revealed that many of them came from poor socio-financial backgrounds and therefore struggled financially. It emerged that students on the bursary system are often dependent on the stipend for a source of income. Some are the breadwinners and have a family to support. One academic participant mentioned some students are drowning with financial debt and had to be referred to EAP because they cannot manage their finances properly.

Students said that they had to pay for the text books; accommodation, uniforms, food and travel to campus or clinical facilities. They expressed that the bursary is not enough and does not keep up with inflation. Many come to campus hungry and cannot concentrate.

“I have seen more students with empty stomach... They cannot concentrate... this money for bursary system doesn't last for the whole month” [AFN]

“The books are expensive.....the prices are going up but the stipend that we get is constant and we are expected to pay for books, buy food, pay rent, travel to college.... our bursary is only R3000 monthly... and all the deductions are like R2040... and our books are more than that” ... [AFN]

“Some of us are breadwinners and have a family to support” [AFS]

Background education: It was indicated that the background education of the learners has an impact on their academic progress. One academic participant stated that the preparation students receive in high school influences performance in post-secondary education, as stated in the following excerpt:

..... “what I have observed is that with the well-known high schools that have good results, students cope with the load of work we have in nursing... but then some public schools especially from townships..... they do not cope with volume of work because of the preparation they receive in high school” ... [AN]

5.4.2.6 Student support mechanisms

The two main dimensions that emerged under this theme which are linked to student success, retention or attrition were (a) academic and (b) financial support.

Academic support: Participants reported that the college does not employ any counsellors or academic support developers to offer support to students with learning problems, language problems or social problems and that there are no formal or structured academic support programmes. Class teachers take the role of counselling and support for those students who come forward and some of the academic staff arrange remedial teaching sessions for the weak students. A plan is made for them and notes are kept through the use of a student contact form. In some campuses, a lecturer is chosen as a counsellor, while others use the hospital services to provide counseling to students on a referral basis, for example a psychologist or social worker. The following abstracts from the academic participants explain:

“Students get a lot of academic support and counseling from their tutors, HODs, deputy principal and principal... We also refer them for marriage counseling, alcohol anonymous, EAP depending on the identified need... but academic support is done by lecturers.” [AS].

“We don’t have a person employed for this... so for example if a student has a language problem we don’t have anywhere to send the student for help” ... [AS]

“at the moment we don’t have strong support we rely on class teachers, and then we also refer them for EAP otherwise we don’t have something that is very strong here; I for one will recommend that we have a person dealing with counselling of students”[AN]

Participants recommended that study platforms be created after hours at the campus as well as extended library hours to support students who live outside the campus, where study conditions are poor:

“Seeing they are staying in outside environment where study conditions not sure how it is... A controlled library after hours will do..... can be used after hours say up to 19h00 can be much better as a recommendation” ...[AS]

Participants emphasized the importance of student support, saying that without it, a large percentage of students would fail or dropout. They recommended the employment of an academic support developer who would be trained to assist students in developing their much needed study skills. Participants suggested that lecturers could refer weak students to the academic support developer as they know their students and are aware of those who need help. This support person could teach and encourage students to work together and support each other, with the rationale that peer support would be of benefit to them.

“Somebody who will deal with the weak students... because they see it coming, as a lecturer..... that this student won’t make it in the examination “will be referred to this particular person who will be trained to assist students and do extra..... will do mostly peer education and extra work,

assignments and tests. work closely with the lecturers of these different subjects.”[AS]

Participants revealed that a buddy system is used in one of the campuses, whereby new students are allocated a senior student buddy who mentors them throughout the programme. Participants reported that new students have found this system very encouraging.

“Only thing that we normally do on the last day of the first block we arrange a professional day where they get mentors. Their mentor is a senior student who is going to mentor this neophyte”..... [AS]

Financial support: As already mentioned, students in the four year nursing programme are supported financially in the form of a bursary, which means that they receive a monthly stipend and do not have to pay tuition fees for the entire duration of their training. However, as one of the academic participants explained, the bursary payment is dependent on the student’s progress as it is only allocated for a specific period of 4 years.

“Students are budgeted for four years which is 48 months. If they are demoted because of poor academic progress..... the bursary is deactivated and once they catch-up with the level it will be activated”... [AS]

Student participants stated that the bursary does not cover all their costs for books, travel accommodation and is not in keeping with inflation. They explained:

“Lecturers expect us to have the school books and our bursary is only R3000... and all the deductions are like R2040... and our books are more than that”..... [AFN]

“Maybe they should provide students with books and uniform”....[AFN]

5.4.2.7 Monitoring, feedback and assessment

With regard to the dimension of monitoring, feedback and assessment, participants revealed that students are given the opportunity to monitor their learning progress and evaluate their courses on campus at the end of college semesters and in the clinical areas at the end of each

month. Students are also represented at campus board meetings, the Senate and the College Council forums. Academic participants said that students also give them feedback when they see new developments in the clinical areas. Excerpts from participants:

“They do give us feedback on our performance... We also get ward reports”... [AFS]

“We give them course evaluation at the end of each block or semester”... [AS]

“Students attend campus boards... they also join during tutors’ meeting if there is something special to be discussed”... [AS]

Participants mentioned that the campuses do provide monitoring to students, both academically and otherwise. If student are seen to be struggling, they are closely monitored and followed-up. Counselling is available to ascertain the problem and a plan is made to assist them to make up the hours and the lectures that they have missed. Participants also indicated that there is a student body, referred to as Learner Representative Council (LRC) that allows students to have input on academic matters concerning them.

“If we identify a struggling student we have to do close monitoring and follow up”..... [AS]

“They have social meetings, LRC meetings, and different committees”... [AS]

It emerged that there is no consistency with regard to *exit interviews*, with some participants indicating that exit interviews are conducted when students are excluded from the programme, some saying that these are not done and others not being sure. Academic participant stated:

“We do some exit interviews and appraisals”... [AN]

“Exit interviews are done by the Principal... Recently there were so many that failed from the Midwifery module that the Principal asked us to do some of the students”..... [AS]

5.5 MEASURES IN PLACE TO ADDRESS DROPOUT

A review of college policies and qualitative data revealed that the college of nursing has mechanisms in place to address dropout from the programme throughout all the phases of nurse training, and is re-iterated as follows:

5.5.1 Pre-enrollment phase

The college of nursing has a recruitment and selection policy which explains how recruitment is done. The policy clearly sets out the admission criteria which have to be followed during selection (KZN College of Nursing, 2010a). To facilitate success in the programme, candidates must be in possession of a matriculation certificate that includes Biology/Life Science, Mathematics/Physical Science and English as essential subjects. Since 2010, student interviews have been conducted at campus level to select suitable candidates from the shortlist provided by the District Selection Committee. However, this process has not yet been structured or formalized by the college of nursing and is a very basic process. Similarly, a medical examination is conducted to determine fitness to practice nursing, but this process, too, has not been standardized or formalized throughout the college of nursing. Financial support is provided through a bursary system and students do not have to pay tuition fees.

5.5.2 Integration phase

A rigorous orientation and induction programme is in place to ensure that students are eased into the programme and familiarize themselves about the programme, the examinations, the campus and hospital environment, the college structure, available support services and student responsibilities. Students are introduced to senior students and integrate socially. Cultural days, welcome events and sport events are held to help students socialize and to promote peer interaction.

Furthermore, the college has a student information rule book which details the programme and examination system of the college. This rule book is updated from time to time through evidence based practice and input from students and academic staff (KZN College of Nursing, 2013a).

5.5.3 Engagement phase

A structured course design is laid out and adhered to by the campus, which provides information to students about their college days, clinical placements and examination schedule so that students are clear about their training schedule and can prepare adequately for their training. A structured teaching programme is available to students with study guides for each subject and module. There are various support services available, such as libraries, accommodation (though not available to all) and transport, (also not always available to clinical practice areas). Academic support for at-risk students is provided by lecturers through remedial teaching, support and counseling. There are three clinical facilitators appointed by the college for each campus to mentor students in the clinical setting and students can be referred to an Employee Assistance Programme, which is available in the hospital to all personnel. Certain recreational facilities are available, such as soccer, netball, volleyball and choir groups, and intercampus sporting activities are encouraged.

An additional year of training time has been factored in for students who do not progress satisfactorily within the prescribed time of four years, thus giving them an extra year to complete their training. Student training policies are continually being revised to improve the overall teaching and learning programme.

5.6 PARTICIPANTS' RECOMMENDATIONS TO PREVENT DROPOUT

Student and academic participants provided a range of recommendations to promote student support initiatives that will prevent attrition. These emerged through the interviews and from the open ended questions. The recommendations ranged from marketing strategies, recruitment and selection, curriculum matters, student rules for examinations, library support, financial support, clinical support, and improvements in accommodation and the teaching and learning environment. These recommendations are grouped according to the concepts of the conceptual framework.

5.6.1 Pre-enrollment phase

5.6.1.1 Marketing of the programme

One of the findings that emerged from the focus group interviews and open-ended questions was that many students had chosen nursing as a second choice of career and were motivated by monetary and other incentives. Participants suggested that more aggressive marketing be done to attract candidates who really want to study nursing as a career of choice.

5.6.1.2 Recruitment and selection

Academics suggested that the level or percentage of compulsory matriculation subjects, such as Mathematics or Maths Literacy, be re-viewed as they were of the opinion that good candidates were excluded from selection because the level was pitched too high. There were suggestions that Life Science should not be a critical subject for selection. With respect to the finding that a lot of potential students changed their minds as soon as they realised what nursing was about, participants recommended that potential candidates are put through a pre-training course, whereby they are exposed to the wards, patients and staff, thus helping them

decide whether they wanted to be a nurse or not. Participants also recommended a more stringent interview process to select the best and most suitable candidates.

5.6.2 Institutional engagement phase

5.6.2.1 Curriculum

Student participants suggested that teaching methods be changed in accordance with more current trends. To lessen the pressure of the workload, students from both campuses suggested that more time should be made available for learning modules, that working hours in clinical areas be reduced to allow more time in college, and that the Midwifery module be extended from six months to a year course and the Anatomy and Physiology course be spread out over two years. The last two suggestions were strongly supported by academic participants in both campuses as they felt this would give students more time to assimilate knowledge, both in theory and practice, and to become more skilled in these critical fields. With respect to students being terminated after five years if they have not completed the course, academics recommended that such students be allowed to complete the course as independent students who pay their way, especially in the final year.

5.6.2.2 Examinations

Academics in both campuses supported the view of students that the availability of supplementary examinations for all subjects would reduce the incidence of attrition of students. They recommended that DP marks should count for examinations, which would enhance the pass rate and that those students who do not get a DP should be given another special test before being demoted. Academics also supported the view that if students were given an opportunity to return to training if found to be successful after the direct/independent entry granted to them, this would reduce the incidence of student attrition.

Academic participants said that exclusion from the third year onwards should be reviewed as it contributes to attrition and a waste of time and money.

5.6.2.3 Library support

Participants, especially in the northern campus, indicated that they needed a well-resourced library where they could access reference sources. They recommended that the library be well stocked with up to date prescribed and recommended readings, as well as computers, internet services and audio-visual and teaching aids to support learning. Students stated that several copies of the recommended books should be available in the library so that they are not forced to buy them. Participants from both campuses recommended that the libraries remain open over weekends and that the weekday hours are extended to enhance learning. They suggested it close around 22h00 rather than at 16h00. The extension of library hours was supported by academics in both campuses. To support the large number of students who live off campus where study conditions are poor, academics and students recommended that after hours study platforms be created in the libraries, suggesting that this would promote group studying.

5.6.2.4 Clinical and academic support

Academics suggested that academic student support services and mentoring of students to be enhanced and an increase in student support services to be made available in clinical areas. They claimed that additional clinical instructors, especially in the northern campus would help support learning in the clinical environment, which would greatly relieve the anxiety of students who are faced with new experiences and challenges on a daily basis. A suggestion was made that the college formally employ someone for student academic support services, who would support the weak learners, thereby increasing throughput and reducing attrition. Participants also recommended having tutorials for practical and theory.

Students stated that they only manage to study when they are in the college, as they are expected to work when they are in the wards. They therefore recommended that they should not be used as a workforce and should be given recognition of their student status, as they found it difficult to study effectively while working twelve hour shifts. Students also suggested that they should not work over weekends, which they felt should be reserved for studying. They recommended that clinical conditions be more conducive to learning, with appropriate supervised learning experiences as they felt this was an area which lacked support.

5.6.2.5 Financial support

Findings revealed that many of the students were from a poor socio-financial background and therefore struggle financially. Students stated that their bursary did not cover their books, uniforms, transport, food and accommodation and suggestions of increased financial support were frequently cited. They suggested that the bursary needs to keep up with inflation and also expressed a need for subsidised accommodation, uniforms, books and incentives for good performance. Academics confirmed that students struggle financially if the stipend is withheld as a result of demotion or maternity leave. They supported the suggestion that the bursary system needs to be reviewed as they acknowledged the high cost of books, uniforms and other essentials.

5.6.2.6 Teaching style and attitude to students

The findings revealed that students need more support, especially in crisis situations, and that their issues need to be handled with sensitivity. Participants indicated that some of the teachers were very good, but others were not getting the information across to them effectively. They suggested that teaching and learning methods need to change and that they should be more involved in decision making and consultation.

5.6.2.7 Accommodation

It became evident from the findings that students faced difficulties in finding suitable accommodation and frequent requests were made to address this problem, especially in the northern campus. Difficulties ranged from no accommodation to limited accommodation, with some having to share rooms in staff residences. Students complained that qualified staff had subsidized accommodation, while the bursary did not include accommodation. Students recommended that all students be accommodated in a nurses' residence, separate from the staff residence, where they would be safe and able to study without having to travel distances to get to campus or worry about renting in environments that are risk laden with crime and substance abuse.

5.6.2.8 Extracurricular facilities

Students suggested that more extra-curricular activities should be available as they felt that involvement in sports, recreational activities and sports days helps students to make friends and distracts them from bad influences. It would also encourage team work, student involvement and peer learning.

5.6.2.9 Learning environment

Academic participants recommended that students should be provided with a safe environment that is conducive for studying, acknowledging that on-site student accommodation and safe after hours study areas would promote group learning.

5.7 SUMMARY OF THE CHAPTER

This chapter presented the findings based on the analysis aligned to the objectives of the study and the conceptual framework. It consisted of an in depth discussion of the results

obtained from both the units of analysis and the quantitative and qualitative aspects of the study. The quantitative aspects focused on findings from the structured questionnaire and document reviews, while the qualitative aspects focused on findings of the focus group interviews held with student and academic participants in the two campuses. Of significance, it is noted that there is corroboration of the findings between the quantitative and qualitative aspects of the study, such as the recruitment and selection processes; . mentoring of students in the clinical areas; the teaching and learning methods used by academics; student support services (accommodation, transport, financial aid); the reasons for poor progress, especially with regards to Anatomy and Physiology and Midwifery; the lack of a well-resourced library; the language barriers that affected learning, the large volume of work in the short space of time; and the reasons for choosing nursing.

The comparison of data between the two campuses revealed that conditions in the northern campus were not as good as those in the southern campus and this could be a factor in the greater percentage of dropouts and poor progress in the northern campus.

The next chapter presents the final discussions, conclusions and recommendations. The findings are triangulated to present a thick description of data to enhance the rigor of the study.

CHAPTER SIX

DISCUSSION AND INTERPRETATION OF FINDINGS, SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

Student attrition in nursing, as presented in the background of this study, is of global concern since it affects the much needed supply of professional nurses. This places added strain on the health system, which is experiencing critical human resource shortages, in meeting the health demands of the population (Department of Health, 2012; Stickney, 2008; Wells, 2003). For that reason, the aim of this study was to explore attrition of student nurses in a four year comprehensive basic nursing education programme in a selected nursing college in KwaZulu-Natal to inform student support initiatives to increase throughput rates. A case study method was adopted and both quantitative and qualitative approaches were used. This chapter presents the discussion and interpretation of the key findings in this study in the light of existing empirical evidence and Tinto and Pusser (2006) framework of institutional action, which guided this study. New literature is introduced in this chapter because of the qualitative aspect of this study. This chapter concludes with the presentation of the study limitations and recommendations.

6.2 DISCUSSION OF FINDINGS

The discussion and interpretation of findings are done according to the research objectives of the study. To reiterate, the objectives of this study were: (i) to explore trends in student dropout in the college of nursing basic nursing education programme in terms of (a) gender and age, (b) level of study and (c) discipline/course; (ii) to explore the relationship between student dropout and demographic data; (iii) to explore the relationship between students' study progress and demographic data in the campus of offering; (iv) to explore factors which contribute to dropout rates; (v) to explore the students' level of satisfaction with the

programme; and (v) to describe measure in place to address dropout rates during (a) pre-enrolment, (b) integration and (c) engagement.

6.3 MAGNITUDE OF THE PROBLEM (STUDENT DROPOUT)

The study revealed that for every cohort of students admitted, less than 55% completed within the regulated time of four years, except in December 2011. Only 47.4% completed in June 2009, 50% in December 2009, 48.8% in June 2010, 53.7% in December 2010, 51.4% in June 2011, 50% in June 2012 and 51.9% in December 2012 (KZN College of Nursing, 2013b). This is in line with figures from the Council of Higher Education, where in 2006, only 44% of the students graduated in the regulation time for 3 and 4 year qualifications and 40% had dropped out by the end of regulation time. The Council for Higher Education estimated that even if they had been given extra time to a maximum of 5 years, 45% would never have graduated (Council of Higher Education, 2013)

6.4 TRENDS IN STUDENT DROPOUT

Trends in dropout and age: The results of this study indicated that the majority of students that dropped out in both the campuses were within the age category of 20-24 years. In the study by Donaldson, McCallum and Lafferty (2010), the mean age of students that dropped out was 24.9 years and the studies by Prymachuk et al. (2009) and Wright and Maree (2007) also revealed that younger students were more likely to drop out of the nursing programme than the more mature students. Therefore the findings in this study are not unique to the nursing college under study.

Trends in dropout and gender: The findings also showed that the dropout rate was the highest amongst females in both campuses. The picture of high dropout rates in females is attributed to the dominance of female participants in the study. This is in line with the current picture

that the nursing profession is female dominated (Grady, Stewardson and Hall, 2008). The gender statistics for student nurses in KwaZulu-Natal for 2013 was 75.2% females and 24.8% males (South African Nursing Council, 2013). The work by Pitt, Powis, Levett-Jones and Hunter (2012), however, reported on three studies that did not show a relationship between dropout and gender.

Trends in dropout and language: A high dropout was noted in students whose home language was not English. This finding is supported by Roldens (2011) and Pitt et al. (2012) who reported that students who learn in a language that is different from the one used at home experience high failure rates. It is further supported by Roldens (2011), who argues that students who experience a language barrier may struggle in expressing their ideas and conveying their thoughts fully, thus becoming frustrated, which makes them feel awkward and unintelligent. This may lead to emotional problems and low self-esteem and may affect their level of confidence.

Trends in dropout and level of study: The document review of students that exited the programme in the college of nursing showed that 80.6% (n=690) dropped out at the first year level of training. Similar findings were revealed when comparing the dropout rate in the rural northern campus with that of the urban southern campus. Both campuses had the highest dropout in the first year of study, with 76.9% (n=87) dropping out in the northern campus and 73.4% (n=141) dropping out in the southern campus. This is consistent with the picture in other countries, such as the UK, where in 2006 more than a quarter of students dropped out of their nursing courses (BBC news, 2008). It is also consistent with what has been observed in other nursing institutions in South Africa, where a study conducted by West (2013) in the Western Cape also revealed that the majority of students who dropped out were in their first

year of study. The Council for Higher Education also reported a failure rate of 34% in the first year (Council of Higher Education, 2013).

Several Researchers support the findings of the current study, in their belief that attrition usually occurs within the first year of study since it is the period students get integrated into both the academic and social systems of the institution (Grebennikov and Shah, 2012; Gabb et al., 2006; McMillan, 2005; Nora et al., 2005; Last and Fulbrook, 2003; Tinto, 1993). According to Forret et al. (2007), whose study associated a high failure rate with transition to tertiary institutions, transition was more difficult for students who come straight from high school because they have to cope with a number of changes in their lives, including independence.

Trends in dropout according to discipline or courses: The findings of the study highlighted certain subjects as significant contributors to high attrition, as stated in (West, 2013). It became evident that the majority of students from both campuses found the Anatomy and Physiology course very difficult. Similarly Lehasa's (2008) study in the Free State Province revealed that Anatomy and Physiology were perceived as difficult subjects which contributed to student drop out. El-Sayed and El-Sayed (2013) argued that although it is critical for student nurses to study Anatomy and Physiology to prepare them for nursing practice, most students experience difficulties in understanding these subjects. Johnson, Strange and Madden (2010) also cited Anatomy and Physiology as sources of anxiety to the students due to high failure rate in these subjects. These authors further stated that student nurses and newly qualified nurses in their research reported that they were fearful of this subject and have difficulty in applying them into clinical practice.

Just as in Lehasa's (2008) study, Fundamental Nursing Science and Midwifery emerged as other challenging subjects with high failure rates. The results of Hopkin's (2008) study

conducted in the United States of America found that the Nursing Fundamentals course was a determining factor of whether a student dropped out or succeeded in the programme.

Midwifery was another subject that students found particularly challenging, not only because of the short duration of the course, but also because they experienced difficulty in understanding the terminology and the theory. The study by Carolan-Olah, Kruger, Walter and Mazzarino (2013) also revealed that students experienced a number of difficulties and concerns with Midwifery.

6.5 RELATIONSHIPS BETWEEN STUDENTS' STUDY PROGRESS AND DEMOGRAPHICS

Relationship between students' study progress and language: The findings showed a significant relationship between *language* and *study progress*. A chi-square test conducted to test whether there was a relationship between language and study progress showed there was a relationship between language and those that experienced academic failure (p-value 0.039). Of those that failed, 95.8% (n= 69) in the northern campus and 84.6% (n=33) in the southern campus stated that English was not their home language. This was corroborated in the qualitative results where language as a barrier to learning emerged as a major challenge in terms of indigenous languages spoken by students. Although the college of nursing stipulates that prospective candidates must have English at level 4 according to the National Senior Certificate (KZN College of Nursing, 2010a), studying in a second language has been found to have an influence on academic achievement (Guhde, 2003). Similar results were noted in a study by West (2013) in the Western Cape, whereby dropout was attributed to challenges with language. Lehasa (2008), in her study in the Free State, found that language was one of the aspects that influenced the output of student nurses in the four year comprehensive nursing programme.

Relationship between students' study progress and high school performance:

Also noted in the quantitative results was that there was a significant relationship between *repeating high school* and *study progress* for both units of analysis when cross tabulated. Findings revealed that 66.7% (n=14) of students in the northern campus and 50% (n=12) of those in the southern campus who had repeated a class in high school failed to progress in this programme. A chi square test revealed a significant relationship between repeating a class in high school and progressing well in the nursing programme, with a p-value of 0.004. Tam and Sukhatme (2003) advocate that high grades at school are the best indicator of success and lead to high graduation rates.

Relationship between study progress and level of study: The chi square test revealed a p-value of 0.006, signifying a relationship between level of training and study progress. Unlike the results from the document analysis, which showed that the majority of students dropped out in the first year of study, results from the questionnaire, when cross tabulated for both units of analysis, showed that there was a significant relationship between level of training and study progress in that the majority of students, 57.1% (n=49) in the northern campus and 28.9% (n=38) in the southern campus, failed in their fourth year of study. This finding was supported by the qualitative results which revealed that students were very dissatisfied with the intensity of workload and the short duration of the six month Midwifery module done in the fourth year of training, which is followed by the Psychiatric module in the next six months. As stated by Mason (2012), satisfaction with the programme plays a big role in student attrition or retention. The research by El Ansari (2002b) also revealed that module attrition is related to students' satisfaction with the module they are undertaking. The high failure rate at this level, just like at first year level, may be associated with the introduction of new concepts at this level; Midwifery, Psychiatry and Unit Management.

Relationship between study progress and place of residence: The findings in this study revealed that a higher percentage of students from the north, (84.7%) from rural areas failed their courses compared to those living in urban areas (15.3%). This was also observed in the south campus. De Hart and Venter (2013) associate this picture with the history of South Africa, which is a history of forced location and the withholding of resources, including quality education, from certain rural areas. The consequences of this history manifest in different forms, one of which is the academic performance and success of students from rural areas when compared to students from urban areas. The relationship between study progress and the place of residence or rural areas is not unique in this study. In China, a study conducted by Yi, Zhang, Luo, Shi, Mo, Chen et al. (2012) showed high failure and dropout rates in students from poor rural areas.

The findings in this study also revealed, however, that a higher percentage of students (83%) in the northern campus and 65% in the southern campus who passed all their modules were from rural areas. This may be associated with the educational resilience (the ability to successfully adapt despite challenging and threatening conditions) of students from difficult backgrounds. Waxman, Gray and Padron (2003) and Tinto and Pusser (2006) cite a number of factors associated with students succeeding in spite of evidence of adverse conditions. These include personal attributes such as goal orientation, self-discipline and motivation; positive use of time, prioritizing academic work; family support and expectations; learning environment with well-resourced learning facilities; exposure to technology and leadership; and the overall climate in the school.

6.6 REASONS FOR DROPOUT

As stated in O'Donnell (2011), student attrition is a complex and highly contextual issue resulting from multiple variables and factors, as observed in this study. The model developed

by Tinto (1975) and Tinto and Pusser (2006) also suggest that student attrition is a longitudinal process that starts with individual attributes, family background, academic characteristics and skills and continues through a series of interactions between the individual and the institution. This was also observed in this study. Factors contributing to student attrition emerged as early as the pre-enrolment and integration phase, as stated in Tinto and Pusser (2006), and continued until the end of academic life in the institution.

6.6.1 Pre-enrollment and integration factors

Tinto (2006; 2002; 1975) asserts that a number of factors contribute to student attrition and they vary according to context. Pre-integration factors of significance in this study included the choice of nursing as a career; marketing, recruitment and selection; student expectations; and prior exposure to nursing. Tinto and Pusser (2006) model highlights the importance of attracting the right students to the programme for successful outcomes.

Nursing as a career of choice: The results from this study revealed that nursing was not the career of choice for the majority of students from both campuses. The findings revealed that in many cases, the participants had chosen nursing for financial reasons, as they could not afford to study any other choices; job security or because they had been motivated by family and friends. Gardner (2009), in the United States, found similar results whereby the majority of the students that dropped out felt they did not belong to the programme, reporting that they had just “drifted” into graduate school and were therefore improperly suited. Similarly Grebennikov and Shah (2012), in their Australian study, found that students who dropped out did so because they felt they had been pressured to enroll in a programme they did not want.

Marketing, recruitment and selection: It emerged from the qualitative data that academic participants were not satisfied with the marketing, recruitment and selection processes and advocated for better strategies to attract good and capable students who have the potential to

succeed in the programme. The findings revealed that the college does not have an active marketing strategy due to the high demand for nursing already prevalent and the large volume of applications received. Furthermore, the recruitment is done through an annual advertisement in the local newspapers.

Magerman (2011), Mkhize and Nzimande (2007) and the Department of Health (2008) recommend that innovative strategies are needed to market nursing as a career of choice for young people. Mkhize and Nzimande (2007) and (Wells, 2003) also stress that recruitment strategies must portray a realistic image of nursing. Wright and Maree (2007), in a study on *First year Baccalaureate nursing students' reasons for drop-out*, report that students have misconceptions of nursing regarding the depth of knowledge and responsibility of a nurse and these need to be cleared or else the profession will attract students based on the myths they have. Wells (2003) recommend more public awareness concerning the realities of the nursing profession, including the rigorousness of the nursing curriculum. Participants in this study reported that they had held a number of misconceptions about nursing.

Selection process: The findings revealed that the *selection of nurses* is done through a district selection process within the province using matric grades and certain compulsory subjects as a selection strategy. The selected candidates are then distributed to nursing education institutions throughout the district. No structured competency assessment or formalized preadmission testing are done at either district or campus level. At campus level, logistic processes are carried out for enrollment purposes. Interviews are not standardized, with some campuses carrying out very basic interviews, mainly to share information, and to get a general impression of the candidate and his/her basic communication skills. Participants felt that if selection was done directly at campus level with more stringent assessment, it would be more effective in selecting the best candidates who would therefore have a better chance

of completing the programme. A study conducted in a nursing institution in America, Sadler (2003) found students' essays to be a predictor of whether a student might succeed or not. Prospective students were made to write an essay on nursing as an entry requirement and on analysis of these essays at the end of the programme, it was noted that the majority that had dropped out had written about nursing as external to themselves, while those who had completed the programme had shown internalization of their role (Sadler, 2003). This may be another strategy to select those who identify with the nursing profession. Stickney (2008) advocates for preadmission tests to assess academic ability as low academic ability has been shown to be a factor in dropout. According to Brodie et al. (2004), selection procedures must look at new ways at addressing student recruitment and selection or else the nursing profession will continue to attract those who do not have the academic and clinical aptitude to meet nursing education requirements .

Student expectations: According to O'Donnell (2011), expectations are important in understanding student attrition because they create a frame of reference used to inform selection decisions. This study found that a number of participants' experiences and expectations were largely different to what they saw and experienced. They had perceived nursing to be more practical, with less theory and the programme not so intensive and demanding on them. They were not expecting such a heavy workload, so much practical work, so many examinations, a clinical arena reliant on them as a workforce and little time to study. This is in line with the findings from the study by Wright and Maree (2007) at Tshwane University, which revealed that pre-entry perceptions of what is involved in nursing differed from the reality of nursing education. Mugarura (2010) also found that there was no alignment between students' expectations of the nursing programmes and what was expected from them. Lowe and Cook (2003) warn that students who come with unrealistic expectations will find the new environment overwhelming and frustrating, which will affect their desire to

pursue their courses. This phenomenon of students coming into the nursing profession with unrealistic expectations is not unique to the college in this study and South Africa. Grebennikov and Shah (2012) reported that students who had withdrawn from a programme in Australia had cited the same. Orton (2011) contended that there is a strong relationship between student expectations and student nurse attrition, specifically how expectations of the profession are formed and why they are discordant with actual experiences of nursing.

The findings also revealed misunderstanding in terms of the role of the nurse, their responsibilities as nurses and the curriculum content, especially the practical aspect and the content load to be mastered. In the study by Granum (2004), first year nursing students had expected to be taught practical caring functions of nursing, yet in reality, their curriculum was directed more towards theoretical science subjects. O'Donnell (2011) research, in line with the findings in this study, reported how students had mistaken perceptions of their roles, responsibilities and the curriculum that is used to prepare nurses. In a study conducted by Last and Fulbrook (2003), the students had expected more practical nursing with less emphasis on academic work. According to O'Donnell (2011), the students who experience unanticipated expectations and experiences are more at risk of dropout, especially in the early years of their training.

Prior exposure to nursing: Data sources revealed that students experience no prior exposure to nursing and identified this as a gap and recommended that "pre nurse training" is brought back to expose potential candidates to the rigors of nursing. It was suggested that job shadowing for grade 11 and 12 scholars would assist potential nurses to decide if nursing was for them or not, which would reduce the number of students who drop out. The study by Arulampalam et al. (2007) showed a lower dropout rate in relation to those who had prior exposure to health related settings. Magerman (2011), in her study on *Academic factors*

affecting learning at a nursing college in the Western Cape, recommended that job shadowing be included as one of the selection criteria, suggesting that prospective students should complete a certain number of hours in health clinics or hospitals to observe and shadow professional nurses to help them make an informed decision regarding their choice of nursing as a career. This would prevent attrition in the programme as a result of making a wrong choice (Magerman, 2011).

6.6.2 Institutional engagement factors

Curriculum, design and instruction: The majority of participants indicated that *insufficient time allocated to various modules* was a major reason for dropout. Both the academic and student participants stated that in subjects/modules such as Anatomy and Physiology and Midwifery, the time allocated to the modules was not adequate for the heavy workload in these areas. Other findings that emerged from the qualitative aspects revealed that participants were not satisfied with *overload of curriculum content*. On the issue of curriculum overload, Magerman (2011) concluded that regular updates are required to ensure that only the relevant learning outcomes are included in the curriculum to overcome the problem of students coping with overload in the curriculum. Last and Fulbrook (2003) also indicated that 78% of the students felt the content of the education programme did not meet up to their expectations. Kuh (2009) suggests that educational institutions would do well to arrange curricula in accordance with good educational practices which would encourage students to put more effort in their learning. Magerman (2011) maintain that the use of student evaluations and student satisfaction surveys is a valuable method of transforming teaching strategies.

Further areas where participants were dissatisfied included, *teaching strategies used, absence of supplementary examinations, continuous assessments not included in summative*

examination marks, the limit of five year duration of training (four years plus one year) and the lack of a policy for students to resume training, giving those that have been excluded no opportunity to complete their studies. In addressing most of these issues, Essack (2009) recommended learner centered curricula with a focus on academic and cognitive skills, and the capacity for self-directed learning. This requires the use of teaching, learning and assessment methodologies, such as teamwork and collaborative learning, for example problem based learning and case based learning. Learning can be enhanced through engagement and interaction between learners and teaching persons. Academic staff requires training and development in learner-centered curriculum design (Essack, 2009). Ibrahim, Rwegasira and Taher (2007) support the view that the quality of instructors and the variety of technology used are important for student success. Curriculum design must consider factors that will facilitate student throughput.

Personal circumstances: This study revealed that a number of personal circumstances contributed to student dropout. These included absenteeism, ill health, family responsibilities, misconduct and death. Roldens (2011) cited similar reasons, with family responsibilities rated the highest, followed by health reasons. Elaborating on absenteeism Roldens (2011) stated that excessive absenteeism could lead to disinterest in the programme and studying in general, thus increasing the chances of dropout.

Students learning environment: Both quantitative and qualitative findings reflected *the learning environment* as one of the major reasons for dropout. The participants expressed dissatisfaction with the learning environment, highlighting the poor quality of library services, poor housing accommodation for students, noise and the lack of designated study areas. The clinical learning environment also emerged as a major challenge for learning as students identified issues, such as shortage of qualified personnel and that they were

overworked and exhausted, which impacted on their study habits. This result is similar to the findings of Lopez-Rabson and McCloy (2013), in their Canadian study, whereby some students dropped out due to issues related to the campus atmosphere. Last and Fulbrook (2003), in the United Kingdom, yielded similar results whereby the students who dropped out of their study felt they lacked adequate knowledge and training to cope in the clinical learning environment. Likewise West (2013), in the Western Cape study, also found that some students dropped out due to poor communication at the clinical sites, which had not facilitated their learning experience.

Lack of adequate student support and mentoring services also emerged as one of the major reasons for dropout. Similarly, Cook (2010), in the United States, also found that students dropped out because they felt they lacked the support to cope with the stress as the nursing programme progressed. Likewise, Grebennikov and Shah (2012) in Australia also found that the majority of students that dropped out in their study felt they lacked support from the faculty. The findings of Thomas (2002) in England add an interesting dimension to this aspect, as this author reported that faculty support played a major role in retaining students who were contemplating dropping out of the programme due to financial hardships. The results from the study by Stallone (2011), in America, also support these findings in that the majority of students attributed their success to the support they received from the faculty. Forret et al. (2007), in their New Zealand study, found that students indicated that support from both faculty and their peers played a significant role in their success in the programme. Lotkowski, Robbins and Noeth (2004), in their American study, also found that institutional commitment, social support, the contextual influences of institutional selectivity and financial support, and social involvement had a moderate relationship with student retention.

Financial aid: Data sources revealed that insufficient financial aid was a major reason for dropping out. Findings revealed that many of the participants were the breadwinners of the family. The participants from both campuses indicated that the financial assistance provided by the college in the form of a stipend/bursary was very limited, did not keep up with inflation, did not meet their needs for daily living and was insufficient to cover costs for accommodation, travelling, uniforms and books. West (2013), in another South African study, reported that financial problems were among the reasons attributed to dropout. Likewise Last and Fulbrook (2003), in the United Kingdom study, Lopez-Rabson and McCloy (2013) in their Canadian study and Grebennikov and Shah (2012) in Australia also found that financial problems led to student attrition.

Student satisfaction in the programme: Regarding student satisfaction about the programme, the majority of students reported satisfaction with a number of practices and activities, but expressed *little satisfaction* in terms of information about the college/campus prior to enrollment, student support services, teaching aids, recreational facilities on campus, transport to clinical facilities for practical learning, accommodation facilities, mentoring in the clinical placement and opportunities for resumption/return to training. Data sources revealed that this was more evident in the northern campus than the southern campus. The Mann Whitney test revealed that the satisfaction level was not the same for study progress between the students who were progressing well and those experiencing failure, with an alpha of 0.014. It also showed that the distribution of satisfaction level was not the same between the two campuses of study, with an alpha score of 0.001. Crede and Borrego (2012) argue that students whose expectations have been met across a variety of levels are more likely to be satisfied and engaged in their degree programme, which in turn leads to their success. Likewise, Roberts and Styron (2010), in their United States study, also found that low student satisfaction levels with faculty/student relationships significantly attributed to drop out from

the programme. Mason (2012), in her study, found that satisfaction with the programme played a big role in whether students completed or discontinued the programme. Likewise, factors such as satisfaction with the type of module students are undertaking highly influenced *module* attrition (El Ansari, 2002b). The study by West (2013), showed the highest level of satisfaction at the third year level, where it was found that students experienced less stress and a low attrition rate. The findings of Baykal et al. (2005) showed the lowest level of satisfaction at the fourth year level in the programme.

6.7 CURRENT MEASURES IN PLACE TO ADDRESS DROPOUT

This study revealed that there are currently a number of measures in place to address student dropout, but that they are not well structured and formalized. Finding revealed that there are measures in place across the three phases specified in Tinto and Pusser (2006); pre-enrollment, integration, and engagement phases.

6.7.1 Pre-enrollment measures

The college of nursing has a *recruitment and selection policy*, which guides how recruitment and selection are carried out. The aim is to ensure that suitable candidates are recruited to the programme, which is in line with Wells (2003), who argues that it is critical to attract candidates who have a genuine interest in nursing. In this study, it emerged that the policy sets out admission criteria that are geared to selecting candidates that have the capability of completing the programme.

Data sources revealed the need for a standardized recruitment process that would be consistent across all campuses. Participants also suggested marketing of the nursing profession, whereby more information would be made available to the public to assist potential candidates in making informed decisions. This finding is supported by Hayes (2007), who asserts that recruitment for nursing should ensure that applicants receive

relevant, accurate information to promote realistic expectations of nursing education and practice, which in turn would decrease attrition and early withdrawal from the programme.

The findings in this study revealed that a non-standardized basic interview is conducted in different campuses mainly to give information and assess basic communication skills. According to Sadler (2003), admission criteria should be clear and to select the best and most suitable applicants on the assumption that they will be successful in the programme. Admission criteria and the admission process must make it possible to identify those candidates who are most likely to successfully complete the course of study (Gallager, Bomba and Crane, 2001). Stickney (2008) recommends that early intervention strategies, such as preadmission tests, should be put in place to prevent dropout, being of the view that low academic ability is the main factor in a high attrition rate

The participants, both the students and the lecturers, believed it was important that the right kind of students should be targeted when marketing the nursing programme and suggested marketing strategies that generate more public awareness of the profession and what it entails. This was also raised by Wells (2003) in her study on an epidemiological approach to addressing student attrition in nursing, who recommended having public awareness campaigns that highlight the realities of the nursing profession and provide accurate information on the curriculum and the rigorousness of nursing education programmes. The author concluded that students may be entering a nursing programme without a thorough understanding of what it involves and therefore suggested that recruitment strategies should strive to ensure that a realistic image of nursing is portrayed. Grainger and Bolan (2006) recommended several recruitment strategies to promote correct perceptions of nursing and attract appropriate applicants, which included oral presentations by nurses in classrooms and

communities, written promotional material about nursing and nursing programmes, as well as contact opportunities with nurses at career fairs, information booths and open houses.

It also emerged that the college provides *financial support* in that it does not charge tuition fees and students are assisted financially through a bursary system. This is viewed as a measure to retain students as it is a known fact that many students dropout from post-secondary education because of financial hardships. It became evident from the data that many of the participants had chosen nursing because of the financial assistance that nurse training offers. Scott et al. (2008) recommended providing financial support in the form of scholarships to cover non-tuition costs, such as books, internet and printing costs. Wells (2003) refer to all these strategies as primary prevention strategies for student dropout.

6.7.2 Integration measures

Various measures have been put in place to ease the transition of students into the programme. A rigorous orientation and induction programme familiarizes students about the programme, the curriculum, the college environment, the personnel and available support services. Students are introduced to senior students and they integrate socially. Data also showed that cultural days and welcome events are held to promote cultural diversity, sensitivity to ethnic groups and friendships. This is in line with recommendation of Long et al. (2006), who claim that a responsive social environment must be provided with an active orientation and transition programme supported by campus based clubs and societies. Similarly, Tinto and Pusser (2006) and Tinto (2002) postulate five conditions that are supportive for student learning and retention, one of which is student support. Tinto claims that students are not prepared for the rigors of academic life and therefore need support to help them integrate socially and academically. Such support can take the form of basic skills

courses; study groups; counseling and mentoring; and ethnic support centres for students who find themselves in surroundings that are unfamiliar.

6.7.3 Engagement measures

The findings revealed that a structured curriculum and course design has been set to support students in the programme, thus preventing attrition. This provides information to students about the various courses, processes for examinations and requirements for promotion to the next level of study (KZN College of Nursing, 2013a). A structured teaching programme is available to students with study guides for each subject. Support services such as library facilities, accommodation and transport services to clinical practice areas are available, although findings revealed that some of these are not adequate.

Data sources revealed that poor student support contributes to student attrition. In an effort to prevent attrition and promote retention, lecturers provide academic and clinical support by mentoring students both in the college and the clinical setting.

An additional year of training time has been factored in for students who do not progress satisfactorily, thus preventing attrition due to insufficient time in the training programme. Scot et al., (2008) identified various measures that prevented dropout, which included the presence of a supportive peer group; staff who are accessible and responsive to student needs; a coherent, flexible and clear course design that uses a variety of teaching and learning methods; and efficient, accessible IT, library and student support mechanisms. These findings were complemented by a similar study by Long et al. (2006), whose recommendations highlighted institutional strategies to improve retention, thus minimizing attrition. These included providing detailed information about courses, good teaching, improving the social environment, assisting with financial support, customizing academic support services to suit students' needs and monitoring withdrawal patterns. Ibrahim et al. (2007), who conducted a

study on a distance learning programme in Saudi Arabia, concluded that students' success critically depended on the quality of instruction and the variety of technology used to support the learning programme.

Finding of this study showed that course evaluations and feedback are given to students regularly and exit interviews are conducted as a strategy *for monitoring and early warning* regarding students' progress, but student satisfaction surveys are not done. Wells (2003), in a study to address student attrition in nursing programmes, came up with primary, secondary and tertiary measures to prevent dropout. Primary prevention measures include marketing of the nursing profession to address the misconceptions and unrealistic expectations, exposure of those interested in nursing to the nursing environment and having information available to the public about the nursing profession. Secondary prevention measures included conducting student satisfaction surveys; developing criteria to identify students at risk and conducting a trend analysis on the number and percentages of students who dropout. Tertiary prevention included conducting exit interviews to determine if the reasons that resulted in dropout could have been prevented (Wells, 2003). Tinto (2002) postulated that involvement, feedback and relevant learning are critical for success and student retention.

6.7.4 Student outcomes

Student support measures during pre-enrolment, integration and engagement phases impact on student outcomes. The findings revealed that the college monitors student academic progress and success through a reporting system at the governance structures of the college; subject sub-committees, and senate and college council forums (KZN College of Nursing, 2013a) and that continuous reviews are done to promote student throughput. Long et al. (2006) recommend regular monitoring of withdrawal and examining the patterns of attrition.

In conclusion, taking into consideration the magnitude of the student dropout in this study, it is important to reflect on the implications of this problem. In the United Kingdom, implications of student attrition were analyzed in terms of cost, where a 56% dropout rate of nurses was estimated to cost taxpayers an estimated £98 million (BBC news, 2008). The participants in this study indicated that the provincial government funding the training of nurses had changed the funding system for student nurses to a bursary system as an effort to control costs (KZN Department of Health, 2010).

In developing countries such as South Africa, there is a gross shortage of nurses and student dropout impacts significantly on the pool of nurses providing nursing care and impacts on the quality of care provided to patients. Furthermore, in South Africa and other countries, there is concern about the ageing nursing population. The findings of this study therefore suggest that there is a serious need to address student nurse dropout so as to increase throughput within the set time.

6.8 LIMITATIONS OF THE STUDY

The limitations of the study can be summarized as follows:

Failure to contact students who had dropped out of the programme: The researcher found it extremely difficult to trace ex-students through the contact details that had been provided. Questionnaires were mailed to the last known addresses of ex-students and this was followed by trying to contact them telephonically, which proved unsatisfactory. Of those that the researcher did manage to contact, only a few (12) returned the questionnaire. Attempts to trace ex-students delayed the data collection process by about two months. The researcher compensated for this limitation by the complete document review of all students that had dropped out of the college of nursing from its inception in 2005 until 2012, including some records of exit interviews.

Record keeping: The researcher experienced difficulties in obtaining detailed demographic and academic data from the college records pertaining to ex-students and their reasons for dropping out of the programme. The college of nursing does not store student information on an electronic database, which posed a great challenge in tracking students' progress easily. Locating records was a challenge due to the filing system and extracting information from hard copies of student files. This was a time consuming and tedious process, which contributed to delays in finalizing this study.

Magnitude of the study: The study took much longer to complete than anticipated. Each objective involved a sizeable amount of data, which took time to process, examples being the trends according to different variables, and reasons for dropout and measures to address student dropout. The researcher had to consider the length of the final research report and was therefore unable to report each area in depth.

Large amount of data: The mixed methods and case study approach using both qualitative and quantitative analysis yielded a huge amount of data which could not be fully explored due to containing the length of the final report. therefore, only the most significant findings were highlighted.

6.9 RECOMMENDATIONS

There are many factors that contribute to throughput, retention and attrition of students. This study revealed multifactorial reasons for poor progress and attrition of students. Based on the findings of this study, the researcher makes the following recommendations to improve successful student outcomes:

6.9.1 Administration

More focus placed on marketing, recruitment and selection of students: Although the number of applicants for nursing far outweighs the seats available for nursing programmes in the selected college of nursing, the findings revealed many students drop out of the programme when they realize that it does not meet their expectations. It is therefore vitally important that prospective students have a more realistic perception of nursing as a career on recruitment. Rather than simply placing an annual advertisement in the newspapers and on the website to recruit students, it is recommended that a *more comprehensive marketing strategy* be implemented, which focuses on targeting suitable candidates and ensuring that they are more aware of the realities of the nursing profession. It is suggested that learners at schools from grade eight onwards are targeted and that they and other applicants are exposed to open days and tours of hospitals so that they can experience the realities of nursing. This could include job shadowing for grade 12 learners.

In addition to candidates having to achieve good academic grades in secondary education, a *structured interview process* is recommended, whereby prospective students are assessed to determine whether they have passion for nursing. The National Strategy for Nursing Education, Training and Practice supports a rigorous selection process by to attract suitable candidates to the profession (Department of Health, 2012).

It is further suggested that the admission criteria be reviewed as the study revealed that many good candidates who show a genuine interest in nursing are not selected because the level of grades is pitched too high in subjects which do not necessarily have impact on what is studied in nursing.

Review of college rules: It is recommended that the rule on exclusion be reviewed. At present, the college rules stipulate that students are excluded from the programme when they

have exhausted the five year training period (KZN College of Nursing, 2013a). The findings of this study revealed that in many cases, students at this stage have almost finished the programme and only have one or two modules outstanding. This not only means that the funding that has been expended to this stage goes to waste, but it also contributes to the high statistics of attrition. The recommendation emanating from this study is that students who have exhausted the five year period should be allowed to continue to completion as independent students (meaning without a bursary). It is further recommended that consideration be given to alternate ways of managing academic failure, bearing in mind that there are about twenty two external examinations in the four year programme.

Administration of student records: The research showed that the college lacks an electronic database for learner records, which is an aspect that needs improvement. It became evident that statistics with regard to study progress cannot be readily retrieved and that learner progress is not tracked throughout their training. It is therefore recommended that an electronic database be installed as a matter of priority. Statistics on student enrollments, attrition, completion, graduation numbers, gender and so on are frequently required by policy makers, politicians and relevant stakeholders. Such a database is an essential requirement for accreditation of the college as an institution of higher learning.

6.9.2 Curriculum design and structure

The findings of this research highlighted the diversity of students' backgrounds and it became evident that some students are prejudiced with respect to language skills and background education, factors that would contribute to the high rate of attrition. The following are therefore recommended:

- a) *Including a module into the programme on language and communication skills to facilitate communication, especially with regards to patient care.* Some higher education

institutions have introduced academic skills modules into their curriculum to strengthen students' skills in coping with academic life. It could be offered as an elective module to those students who need such support.

- b) *Separating Anatomy and Physiology, as well reviewing the duration of the module/course.* Findings revealed that dropout is highest at first year level, with participants citing difficulties associated with the Anatomy and Physiology module as one of main reasons for dropout. It is therefore recommended that these courses be offered as stand-alone courses to allow for in-depth engagement with the content of each. Another option is that Anatomy and Physiology be offered over a period of more than one year. A number of university-based nursing programmes introduce Anatomy and Physiology at first year level to allow students to start applying them in Fundamental Nursing and then continue the course in the second year to spread the load of this demanding subject. By following such a course of action, the college in this study may become a benchmark for other schools of nursing.
- c) *Reviewing the Midwifery module.* Participants identified Midwifery as a major challenge in the fourth year of the programme, saying that both the theory and practical aspects of this module needed more time allocated to them. It is recommended that this discipline be taught over a period of a year and that some non-core aspects be covered in other disciplines in an integrated manner for example Community Health Nursing and Gynaecology. This would require a curriculum mapping exercise to identify such content and engage on how it may be addressed in other modules without compromising the quality. Redistributing some of the content may reduce content overload and unnecessary duplication. In this way there may be more time to assimilate knowledge and acquire adequate practical skills and confidence in this discipline.

- d) *Reviewing the curriculum to address content overload.* The findings showed that students find the programme very arduous, particularly in view of the fact that they also work long hours in the wards. It is therefore recommended that the college embark an exercise to review the curriculum to establish what is relevant and essential (must know) content and the content that is good to know, but not essential. This exercise may also include revisiting teaching methodologies to promote those which inspire students to be active, self-directed and lifelong learners.
- e) *Reviewing the examination system.* The examination system needs to be revisited as the findings showed a number of practices that contribute to student dropout.
- f) *Including continuous assessment marks in the final assessment.* It is suggested that continuous assessment marks be incorporated into the final mark as this is deemed to be in keeping with higher education principles and with reforms in nursing education. However, this would necessitate the college of nursing devising a structured way of standardizing assessments to ensure fairness and consistency across the campuses.
- g) *Reviewing the management of DP requirements.* Participants highlighted two issues with the DP requirements which they believed contributed to dropout. They suggested that the pass rate would be enhanced if the DP counted for examinations and also suggested that students who do not get a DP should be given another special test before being demoted. It is therefore recommended that the current practice regarding DP marks be reviewed to give students with mitigating circumstances an opportunity to write an additional special assessment in order to qualify for the examination.
- h) *Introducing supplementary examinations.* In keeping with principles adopted in other institutions of higher education, it is recommended that supplementary examinations be

introduced for all courses and modules to facilitate throughput and timeous completion of the programme, thus reducing the attrition rate.

- i) *Opportunity for excluded students to resume training.* It is recommended that consideration be given to students who wish to pursue their career in the nursing profession, but have been excluded from the programme, by allowing them to resume their training if they pass the direct entry (independent entry) afforded to them as this would reduce the incidence of student attrition. Students who have left for personal or other reasons could also be permitted to resume training through an appeal process.
- j) *Time interval between examinations.* Another recommendation is to increase the time interval between examinations and to provide study days at examination time. This would provide support to students by giving them some time to prepare for the examinations.

6.9.3 Structured programmes for academic monitoring and support

Current literature advocates for opening access and providing support to ensure success (Council of Higher Education, 2013; West, 2013; Grebennikov and Shah, 2012; Department of Health, 2012; Stallone, 2011; Lehasa, 2008). As the nursing programme attracts students from diverse backgrounds, it is recommended that the college introduces structured programmes for academic monitoring and student support.

- a) *Academic monitoring and support policy and guidelines:* It is recommended that a standardized academic monitoring and support policy and guidelines be developed for the multiple campuses in this college.
- b) *Academic and clinical support programme:* Building on the feedback of participants, it is recommended that a structured and formalized academic student support programme be established for the whole college, which is overseen by a lecturer coordinator and

manager. Such programmes usually have a coordinator, with senior students serving as additional support to students both on campus and in the clinical setting. Traditionally difficult subjects such as anatomy and physiology, and psycho-social health and finance related issues could also receive additional support. The programme should have mechanisms to screen students who are at risk of drop out as well as structured support to address the risk factors. This may require benchmarking with institutions that have well established academic monitoring and student support programmes. Clinical support may include making senior year students available to serve as peer mentors in clinical settings. It is recommended that provision be made for additional clinical instructors to support learning in the clinical environment as students expressed anxiety in the clinical settings, which affects their learning.

6.9.4 Learning Resources

Strengthening clinical learning resources: It is recommended that the clinical training platform must be conducive to learning with appropriate supervised learning experiences. The National Strategy for Nursing Education, Training and Practice recommends that clinical education and training be strengthened by re-establishing clinical teaching departments. It also recommended the adoption of the proposed clinical education and training model for nurses and midwives. This study found that students do not study effectively because they do not have full student status as they are used as a workforce. The National Strategy for Nursing Education, Training and Practice supported the notion that nursing students should have full student status whilst undergoing their training (Department of Health (2012)

Library services: Findings of this study revealed that the libraries are not providing the required support as they not only lack resources, but are also not open at times when needed by students. A large number of students live off campus, where study conditions are poor,

and need a place to study that is safe and conducive to learning. A recommendation is made to the college to ensure that the libraries are well-resourced so that students have access to up-to-date books, readings and journals, and that computers, internet services and audio-visual teaching aids are available to support learning. A further recommendation is made to extend the opening times from 1600hrs to 2200hrs on weekdays and that the libraries are also open over weekends.

6.9.5 Accommodation

The findings revealed that finding suitable accommodation poses great challenges for students. It emerged from the interviews that the removal of the traditional nurses' home has resulted in a dire shortage of student accommodation. While limited accommodation is available for students in staff residences, many students have to find rented accommodation. It became evident that students face issues of safety, noise and other factors which are not conducive to study. The National Nursing Education, Training and Practice Strategy acknowledged the need to provide nursing students with subsidized accommodation (Department of Health, 2012). It is therefore recommended that the college motivate to the Provincial Department of Health (as a structure that oversees and funds nurse training) for suitable and adequate accommodation for students. The accommodation should have study and recreation facilities that promote the culture of learning, and peer learning and support.

6.9.6 Financial support:

Student participants frequently cited a need to increase financial support. It became evident in this study that the majority of the students are from poor socio-financial backgrounds and that they struggle financially. It is recommended that a funding model be strategized that enables students to afford the costs that are associated with the programme, thus preventing attrition. It is encouraging to note that the National Nursing Education, Training and Practice Strategy

supported the view to provide nursing students with financial support for tuition, books and study materials, living costs, medical aid and indemnity insurance, and uniforms (Department of Health, 2012).

6.9.7 Recreational activities

The scourge of bad social habits such as alcohol and drugs is also a factor that contributes to poor student progress and drop out of the system. The students of the college of nursing are affected by this social evil and the participants claimed that recreational activities are vital to student development. The more students are involved in extracurricular activities the better they engage with peers, resulting in good student outcomes. It is recommended that sports centres and gym facilities be established in centres of learning, especially with the restructuring of colleges.

6.9.8 Support for academic staff

It is essential for lecturers to keep abreast of development in nursing education as it improves the quality of teaching and student supervision, as well as the morale of teaching staff. It is recommended that staff development programmes become mandatory within the administration of the college of nursing. The Nursing Act 33 of 2005 lays down that practicing nurses must attend continuing education programmes to keep up to date with trends and developments in nursing (South African Nursing Council, 2005).

6.9.9 Further research

An important area of research would be to specifically examine environmental and institutional factors that influence attrition/retention of nursing students in public nursing

colleges in South Africa. These factors elaborated in this report include environmental factors such as library services; housing and accommodation; transport to clinical facilities; a conducive learning environment in the clinical practice areas and recreational facilities. Institutional factors include preparation for the rigors of academic life; participation in curriculum design and review; structured academic support and mentoring services; student involvement; financial support; and psycho-social support.

Further research could be conducted to develop a model to enhance mentoring for nursing students in a college with multiple campuses, specifically in the context of their work environment.

It is recommended that further studies be carried out on how best to minimize the problem of attrition due to Anatomy and Physiology and secondly how best to re-structure the Midwifery component such that students achieve more satisfaction in this very important components of health service delivery.

6.10 CONCLUSION OF THE STUDY

The findings in this study confirmed that there is no one single reason or cause for student dropout and that the phenomenon of student dropout is a highly complex matter that has been debated for many decades. However, in this study, the first of its kind at the selected college of nursing, the main contributors to attrition were associated with marketing, recruitment and selection; the academic integration of students into the college; inadequate academic and clinical support services; inadequate library support, and the need for better accommodation facilities, greater financial assistance and a supportive learning environment.

As the scope of this study was extensive in that it was a mixed methods approach using two units of analysis (campuses) and multiple sources of data, an overall view of student dropout

has been established. Therefore, the results and recommendations from this case study can be generalized throughout the ten campuses at the selected College of Nursing, which all undertake the same programme, under the same conditions and administration.

This study has provided the selected College of Nursing with evidence based recommendations to manage attrition.

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Annexure 1: The case study protocol template

RESEARCH TITLE: Exploring the Attrition of Student Nurses from a Four Year Comprehensive Basic Nursing Education Programme at a Selected College of Nursing in KwaZulu-Natal: A Case study Approach

The steps that follow describe the case study protocol in detail.

CASE STUDY PROTOCOL TEMPLATE	
Overview of case study project	<ul style="list-style-type: none"> • The purpose of this study is to explore the attrition of student nurses in a four year comprehensive nurse training programme at a selected nursing college in KwaZulu-Natal. This is a single case study using two sites (campuses) within the case, which act as the units of analysis. In case study design, the unit of analysis is a critical factor (Yin 2004).
Research Methodology	<ul style="list-style-type: none"> • Mixed methods approach using case study design
Research Objectives	<p>The objectives of this study were to:</p> <ol style="list-style-type: none"> i) Explore trends in student dropout in the college of nursing basic nursing education programme in terms of (a) gender and age; (b) level of study; (c) discipline/course in general nursing, midwifery, psychiatric nursing science, community nursing science, anatomy and physiology, and social sciences. ii) Explore whether there is a relationship between student dropout and demographic data in the campuses of offering. iii) Explore whether there is a relationship between students' study progress and demographic data in the campuses of offering; iv) Explore factors which contribute to dropout rates; v) Explore the students' level of satisfaction with the programme; and vi) Describe what measures are in place to address dropout rates during (a) pre-enrolment, (b) integration and (c) engagement
Research questionnaire	<ul style="list-style-type: none"> • A questionnaire to ex and current students exploring concepts from conceptual framework, research questions and literature review • Semi structured interview guide for students. • Semi structured interview guide for academic staff.
Conceptual framework	<ul style="list-style-type: none"> • Tinto and Pusser's conceptual framework guide the study, for literature review, to develop the research instrument and for data

	analysis and reporting.
Sampling method and procedure	<ul style="list-style-type: none"> • Random sampling for quantitative method. Arranged with campus heads regarding sampling procedure and requested their assistance to get list of names of students • Criterion based sampling for focus group interviews for students and academic personnel.
Data collection (Field Procedure)	<ul style="list-style-type: none"> • Access to sites – permission obtained in writing through the principal of the college and campus heads, followed by site visits prior to data collection to establish and gain their co-operation, observe environment and explain purpose and significance of study • Arranged for dates and times for data collection and interview to be conducted • Data collected through the use of questionnaires administered to students and • Focus group interviews to students and academic staff. • Document review - collected on site/ administrative office • Prepared for note taking, recording of interviews and requests for relevant documents. • Have sufficient resources while in the field – personal computer, writing instruments, paper, and digital recordings of conversations. • Provided for unanticipated events. • Prepared for questions asked to the researcher.
Case study report	<ul style="list-style-type: none"> • Considerations of the outline, format, audience of the case study report and considerations of who will review report • Field work results in large amount of documentary evidence i.e. – consideration of what goes in report and what can form part of database for case study. This is important to bear in mind throughout study.

Annexure 2: Questionnaire for students

QUESTIONNAIRE FOR CURRENT STUDENTS

Exploring the Attrition of Student Nurses from a Four Year Comprehensive Basic Nursing Education Programme at a Selected College of Nursing in KwaZulu-Natal: A Case Study Analysis

PLEASE MARK WITH AN X IN THE APPROPRIATE SPACES PROVIDED

Section A: Student Demographics

1. Age in years _____
2. Gender Male [1] Female[2]
3. Is English your home language? Yes [1] No [2]
4. Marital status [Mark with a Cross - X]

Single [1]	Married [2]	Divorced [3]	Widowed [4]	Living with partner [5]	Separated [6]

- 5 Do you have any children? Yes [1] No [2]
6. Where is your home? Rural area [1] Urban area [2]

7. At which school did you do your high school education?

Private School (e.g. College)	1	
Ex-Model C	2	
Government School –urban area	3	
Government School –rural area	4	
Other- specify	5	

8. Did you ever repeat a year at high school? Yes [1] No [2]

9. Where are you presently living?

- At home [1]
- Hospital staff residence [2]
- With relatives [3]
- With friends [4]
- Private accommodation [5]
- Sharing private accommodation [6]

10. What is your parents' highest level of education?

Father		Mother	
Primary school		Primary school	
High school		High school	
Matric		Matric	
Diploma		Diploma	
Degree		Degree	
Other specify----- -----		Other specify ----- -----	

11. What is your current level of training?

FIRST YEAR [1]	SECOND YEAR [2]	THIRD YEAR [3]	FOURTH YEAR [4]

12. Complete if applicable

At what level of study did you drop a group in training?

First [1]	Second [2]	Third [3]	Fourth [4]

SECTION B: NURSING KNOWLEDGE AND PERCEPTIONS OF NURSING

13. Was nursing your _____ career of choice? Mark with a [X] in the appropriate box

First [1]	Second [2]	Third [3]	Fourth [4]

14. If nursing was not your first choice what were your other choices? List two choices.

1.
2.

15. Why did you choose nursing as a career? [May select more than one choice and mark with an X]

Nursing pays me while I study	1	
Did not get accepted for other choices	2	
Could not afford to study my other choices	3	
My parents or family wanted me to be a nurse	4	
Other	5	
If other, please specify		

16. How did you get to know about nursing? [May select more than one item and mark with an X]

Career guidance at school	1	
Exhibitions elsewhere	2	
My family members are nurses or work in a health facility	3	
My friends are nurses	4	
My experiences from visiting sick people in hospitals	5	
Other	6	
If other, please specify		

17. What was your perception of nursing prior to enrolment? [May select more than one item and mark with an X]

Level of knowledge required is simple	1	
Nursing is about practical work mainly	2	
Not much studying required	3	
Other If other, please elaborate		

SECTION C: ACADEMIC VARIABLES

18. WHAT IS/WAS THE LEVEL OF DIFFICULTY IN THE FOLLOWING COURSES TO YOU? Mark each one with an [X]

Name of course	Least difficult [1]	Not so difficult [2]	Very difficult [3]
A Anatomy and physiology			
B Fundamental nursing science			
C Social sciences			
D General nursing science			
E Community nursing science			
F Ethos and professional Practice			
G Midwifery			
H Psychiatric nursing science			
I Clinical nursing sciences(OSCE/practical examination)			

19. BRIEFLY DESCRIBE THE DIFFICULTIES YOU EXPERIENCED WITH THESE SUBJECTS

20. LISTED BELOW ARE SEVERAL REASONS THAT MAY LEAD TO POOR ACADEMIC PROGRESS or DROPOUT

TO WHAT EXTENT ARE THESE REASONS APPLICABLE TO YOUR SITUATION

(FOR EACH ITEM MARK THE APPROPRIATE RESPONSE WITH AN (X))

		Major reason	Minor reason	Not a reason
	Academic			
1	Found the course to be too difficult			
2	Poor study habits or skills			
3	Course not challenging enough			
4	Bad experiences in clinical settings			
5	Dissatisfaction with methods used for teaching			
6	Language barriers e.g. English as a second language			
7	I do not understand what is taught to me			
8	I do not make use of student advisory / counseling services			
9	The time in the various modules is insufficient			
10	The courses demand the kinds of study and work that I dislike or have trouble with.			
11	I cannot take effective notes /or do not have the skill for it			
	Personal Circumstances			
12	Found study too time consuming			
13	The place I live in is not conducive for studying			
14	Home responsibilities are too great			
15	Personal problems			
16	Ill health			
17	family problems			
18	Wrong career choice			
	Financial			
19	I did not have money to get the books I needed to study			
20	Financial aid (student salary/bursary) is not sufficient			
21	I do not have enough money to maintain myself while			

	I am studying			
22	Child care not available or too costly			
	Social integration			
23	I do not enjoy what I am studying			
24	I do not feel comfortable being a student.			
25	I am unable to get to know other students and staff like other students			
26	Being a student nurse made me feel worse about myself than if I was doing something else			
27	I am not able to get involved in extracurricular activities as other students did			
28	Studying nursing is not the way I expected it to be			
	Student Support			
29	The lecturers do not understand my needs as a student			
30	Lack of support from peers/ friends / family			
31	Lack of adequate student support and mentoring services			
32	The learning environment does not facilitate my learning in college			
33	The learning environment does not facilitate my learning in the clinical area			

21. MARK THE APPROPRIATE BOX WITH AN (X) DESCRIBING YOUR LEVEL OF SATISFACTION WITH THE FOLLOWING ASPECTS OF YOUR PROGRAMME.

		DEGREE OF SATISFACTION			
		None	Little	Moderate	Great
1	Information given to you about this college/campus prior to registering /enrolling as a student				
2	Information given to you about nursing as a career				
3	The recruitment and selection process of this college				
4	The registration /enrolment process at campus on commencement of training				
5	The orientation and induction process as a student				
6	The campus environment in general				
7	Amount of contact with your lecturers				
8	Teaching capacity of your lecturers				

9	Curriculum/course content				
10	Rules in the learner information guide				
11	Student support services e.g. counseling , advising, mentoring				
12	Adequacy of books in the library and teaching aids				
13	Extra - curricular opportunities e.g. sports, choir				
14	Recreational facilities at the campus				
15	Involvement with academic staff				
16	Involvement in class participation				
17	Involvement with peers				
18	Transport to clinical facilities for practical learning				
19	Accommodation facilities for students				
20	Opportunities for resumption to training				
21	Mentoring in the clinical placement areas				
22	Feedback about my performance				

22) List three things if changed for the better by the college, would most encourage your progress at the campus. (List in order of importance)

1 _____

2 _____

3 _____

END- THANK YOU FOR YOUR PARTICIPATION

Sr/sr

Annexure 3: Focus group interview guide for students

TITLE: Exploring the Attrition of Student Nurses from a 4 Year Comprehensive Basic Nursing Education Programme in a Selected College of Nursing in KwaZulu-Natal: A Case study analysis.

QUESTIONS ARE GUIDED BY THE RESEARCH QUESTIONS AND THE CONSTRUCTS FROM THE CONCEPTUAL FRAMEWORK.

1. STUDENT ACADEMIC INTEGRATION

1.1 Tell me how are you getting on with your studies?

Are you enjoying what you are studying?

1.2 Prior to you commencing the nursing programme you would have had certain expectations about nursing:

- What were your expectations / views about nursing?

- Have your expectations been met both in the clinical practice area and in the classroom?

1.3 Tell me about the orientation you received about nursing?

1.4 What would you say are the reasons for students failing to progress/dropout from the program?

How do you think this could be avoided?

1.5 Tell me how has your clinical learning experience been?

2. STUDENT INVOLVEMENT AND ENGAGEMENT

2.1 How much of time do you spend on your studies apart from the college time?

2.2 What kind of problems students has that impact negatively on their performance?

2.3 Tell me your views about the curriculum/ involvement in the teaching learning process

- Examination system and college rules

2.4 How do you perceive the teaching capacity of your lecturers?

2.5 What would be your recommendations to the college to promote retention of students and reduce dropout?

3. STUDENT SUPPORT

3.1 How are you financed for your studies?

3.2 Describe the student mentoring available to you in class and in the clinical area?

- How much of contact do you have with your lecturers?

-How can your lecturers assist you to improve your performance?

3.3 The learning environment does it promote your studies?

3.4 How can you as a student improve your performance?

3.5 What improvements you would like to see or adjustments made to the entire training program to support students?

4. SOCIAL INTEGRATION

4.1 Tell me about student's involvement in extracurricular activities?

4.2 How do you get on with your peers, other students and academic staff?

4.3 Are you able to participate as a group? Please explain?

THE END

Annexure 4: Focus group interview guide for academic staff and principals

TITLE: Exploring the Attrition of Student Nurses from a 4 Year Comprehensive Basic Nursing Education Programme in a Selected College of Nursing in KwaZulu-Natal: A Case Study Analysis.

QUESTIONS ARE GUIDED BY THE RESEARCH QUESTIONS AND THE CONSTRUCTS FROM THE CONCEPTUAL FRAMEWORK.

1. STUDENT ENROLMENT

1.1 Tell me what are your views about the process that is followed when recruiting and selecting students into the program?

Probing questions:

-Are you able to recruit students that have the potential to succeed?

- How does your marketing for nurse training take place?

1.2 What information is given to students to ease their transition into nursing?

2. ACADEMIC INTEGRATION

2.1 Tell me from your own experience with students what would be the reasons for students to perform poorly/dropout?

Probing questions:

What could be the underlying reasons for poor progress/ academic failure?

Which course or modules pose the greatest challenge to students and what would be your recommendations?

2.2 Anatomy and Physiology has been cited as challenging for learners what could be the underlying reasons for poor performance in this subject? - Midwifery has also been cited as being challenging- what are your views on this?

2.3 How does the college policies/ student rules/ examination system/ impact on attrition/ retention?

2.4 How is your program designed/ structured over the 4 year period?

- How do this design /structure affect student progression /throughput? What are your views?

- Does your student get an opportunity to give input in course design/course evaluation?

3. STUDENT ENGAGEMENT

3.1 Tell me how you involve your students in the learning program?

Probing questions:

How do you involve your students in class participation? Curriculum reviews, program evaluation?

3.2 What are your views about the teaching strategies that are used in the classroom?

3.3 How do you involve your students in extracurricular activities?

3.4 Can you describe any social and or health problems your student's experience that may have an impact on their learning?

3.5 What difficulties do students encounter in their learning?

3.6 Do you perform any form of exit interviews? - Student appraisals?

4. STUDENT SUPPORT

4.1 Tell me how does the campus provide support to students academically and psychosocially financially?

4.2 Is there a formal student academic development program for the college?

-Can you describe your academic mentoring program or support system?

What would be your difficulties/challenges in providing support?

4.4 How does the college promote the retention of students?

-Are there opportunities for students to complete their training after being terminated from the program?

4.5. What would be your recommendation or what can the college do to promote throughput/retention?

(Please may I have a sample of your curriculum design/structure and the student rule book, examination statistics?)

THE END

SR/SR

Annexure 5: Document review checklist

No	Campus eg Pinetown.	Admission year eg July 2005	Age- on admission eg 22yr	Gender male/female	Dropout Year eg Dec 2011	Level of study dropout eg 1 st yr, 2 nd yr	Reasons for dropout eg FNS, ill- health, A&P
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
Total							

Annexure 6: Comparison of satisfaction levels between north and south campuses

Satisfaction level	North campus	South campus
Pre enrolment factors: Information about the college /campus prior to enrolment	A high proportion of students stated there was little satisfaction	A high proportion of students stated there was little satisfaction
Information about nursing as a career	majority greatly satisfied	Majority moderately satisfied
Recruitment and selection process	Majority greatly satisfied	Majority moderately satisfied
Enrolment & Integration: Registration and enrolment process at campus	Majority greatly satisfied	Majority moderately satisfied
Orientation and induction process	Majority were greatly satisfied	Majority were greatly satisfied
Engagement & involvement: Campus environment	Majority moderately satisfied	Majority moderately satisfied
Contact with lecturers	Most students were moderately satisfied	Most students were greatly satisfied
Teaching capacity of lecturers	A high proportion of students were moderately satisfied	A high proportion of students were greatly satisfied
Curriculum /course content	A high proportion of students were moderately satisfied	A high proportion of students were greatly satisfied
Rules in the learner information guide	A high proportion of students were moderately satisfied	A high proportion of students were greatly satisfied
Involvement with academic staff	Majority had little satisfaction	A high proportion of students stated moderate satisfaction
Involvement in class participation	A high proportion of students stated moderate satisfaction	A high proportion of students stated moderate satisfaction

Involvement with peers	A high proportion of students stated moderate satisfaction	A high proportion of students stated moderate satisfaction
Mentoring in clinical placement areas	A high proportion of students reported little satisfaction	A high proportion of students stated moderate satisfaction
Extra- curricular opportunities	A high proportion of students reported little satisfaction	A high proportion of students reported little satisfaction
Feedback about performance	A high proportion of students stated moderate satisfaction	A high proportion of students were greatly satisfied
Resumption of training opportunities	All students not satisfied	All students not satisfied except one moderately satisfied
Student support: Student support services	Majority stated there was little satisfaction	Majority stated there was little satisfaction
Adequacy of books in library	Majority stated there was little satisfaction	A high proportion of students stated moderate satisfaction
Recreational facilities at campus	Majority stated there was little satisfaction	Majority stated there was little satisfaction
Transport to clinical facilities	Majority stated there was little satisfaction	Majority students were greatly satisfied
Accommodation facilities	Majority stated there was little satisfaction	Majority stated moderate satisfaction

Annexure 7: Participant information sheet

(Student and academic personnel)

RESEARCH TITLE: Exploring the Attrition of Student Nurses from a 4 Year Comprehensive Basic Nursing Education Programme in a Selected College of Nursing In KwaZulu-Natal: A Case study analysis

NAME : S. Ramkilowan

RESEARCH SUPERVISOR: Professor N.G Mtshali

Dear Participant

I, Shanti Ramkilowan will be conducting a research to explore the attrition of student nurses from the 4year program in the KwaZulu-Natal College of Nursing. This study is targeted at students from within the programme, those that have discontinued and academic personnel involved in the teaching and learning of student nurses. I hereby invite you to participate in this study.

The findings of the study will assist the college to support students to complete their studies and thus increase retention and success rate. The study does not have any risk or discomfort and is conducted as a requirement for a Master's degree in Nursing.

Students will be required to complete a self -administered questionnaire. This will be followed by a focus group interview with selected student nurses. Senior academic personnel from the selected campuses will also participate in a focus group interview/ interview.

Strict confidentiality and anonymity is guaranteed which means that your name will not appear in any documents published or unpublished. The campus that you are working in will also not be reflected in any of the documents published. All data obtained will be stored safely. No remuneration will be received; however your participation will be of great value in the improvement of retention of students through the findings and recommendations made from the study.

A consent form will need to be signed by you. Your participation in the study is totally voluntary and you can withdraw at any time without penalty. The result of the study will be made known publicly and will be available in the University of KwaZulu-Natal and the offices of KwaZulu-Natal College of Nursing.

If you have any queries please contact me at the following number and my supervisor if necessary

Researcher: 033-3878643

Supervisor: Professor N.G. Mtshali School of Nursing & Public Health - University of KwaZulu-Natal Durban Tele: 031 260 4946

Thank You

MRS S.RAMKILOWAN (Stud no.971206888)

Annexure 8: Consent to participate in the study

RESEARCH TITLE: Exploring the Attrition of Student Nurses from a 4 Year Comprehensive Basic Nursing Education Program in a Selected College of Nursing In KwaZulu-Natal: A Case study analysis

I the undersigned hereby agree to participate in the study on exploring the attrition of student nurses from a 4 year comprehensive basic nursing education program. I have read the participant information sheet and understand the purpose and benefits of the research.

I understand that I may withdraw this consent and participation at any time in the study without any consequences. My identity and responses provided will be kept confidential at all times during and after the study.

I, _____ (full name of participant) hereby confirm that I consent to participate in this research project.

SIGNATURE _____ DATE _____

RESEARCHER NAME: MRS S.RAMKILOWAN
UKZN (STUD NO 971206888)

If you have any further questions or concerns regarding the manner in which the study is conducted, you may contact my supervisor.

Professor N.G. Mtshali
School of Nursing & Public Health
University of KwaZulu-Natal
Durban Tele: 031 260 4946

Neutral person to contact if there is a need: Dr. J. Naidoo (Post graduate Programme Coordinator)

Thank you for your participation

Annexure 9: Permission to conduct research from the KwaZulu-Natal College of Nursing



health
Department:
Health
PROVINCE OF KWAZULU-NATAL

"KWAZULU- NATAL COLLEGE OF NURSING
P/Bag X9089, Pietermaritzburg, 3200
Tel.: (033) 264 7800, Fax: (033) 394 7238
e-mail: lulama.mthembu@kznhealth.gov.za
www.kznhealth.gov.za

Enquiries: Mrs. S. Maharaj
Telephone: 033 – 264 7806
Date: 2 October 2012

Principal Investigator:
Mrs. S. Ramkilowan
Student Number: 971206888
C/O University of KwaZulu-Natal (School of Nursing and Public Health)

Dear Madam

RE: PERMISSION TO CONDUCT RESEARCH AT THE KZN COLLEGE OF NURSING

TITLE: **"A CASE STUDY ANALYSIS OF STUDENT NURSES ATTRITION FROM BASIC NURSING EDUCATION PROGRAMME IN A SELECTED COLLEGE IN KWAZULU-NATAL"**

I have pleasure in informing you that permission has been granted to you by the Principal of the KwaZulu-Natal College of Nursing to conduct research on the above title.

The data needed for the above research will have to be collected at the identified Campuses (Greys Campus and Ngwelezane Campus) of the KwaZulu-Natal College of Nursing.

Please note the following:

- 1.1 Ensure that you adhere to all policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
- 1.2 This Research will only commence once this office has received confirmation from the Provincial Health Research Committee in the KZN Department of Health.
- 1.3 Please ensure this office is informed before you commence your research.
- 1.4 The KwaZulu-Natal College and the identified institutions for this research will not provide any resources for this research.
- 1.5 You will be expected to provide feedback on your findings to the Principal of the KwaZulu-Natal College of Nursing.

Thanking You

Dr. LL. Nkonzo-Mtembu
Principal: KwaZulu-Natal College of Nursing

uMnyango Wezempilo. Departement van Gesondheid
Fighting Diseases, Fighting Poverty, Giving Hope.

Annexure 10: Ethical clearance from the University of KwaZulu-Natal



25 October 2012

Mrs Shanti Ramkilowan 971206888
School of Nursing and Public Health
Howard College Campus

Dear Mrs Ramkilowan

Protocol reference number: HSS/0934/012M
Project title: A Case study analysis of Student Nurses' Attrition from a Basic Nursing Education Programme in a Selected College in KwaZulu-Natal

Expedited approval

This letter serves to notify you that your application in connection with the above has now been granted full approval following your response to queries raised by the Humanities and Social Sciences Research Ethics Committee.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored in the school/department for a period of 5 years

Best wishes for the successful completion of your research protocol.

Yours faithfully

Professor Steven Collings (Chair)

/px

cc Supervisor Professor NG Mtshali
cc Academic Leader Professor M Mars
cc School Admin. Mrs C Dhanraj

Professor S Collings (Chair)
Humanities & Social Sc Research Ethics Committee
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban, 4000, South Africa
Telephone: +27 (0)31 260 3587/8350 Facsimile: +27 (0)31 260 4609 Email: ximbap@ukzn.ac.za / snymanm@ukzn.ac.za
Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

INSPIRING GREATNESS



Annexure 11: Ethical approval from the Department of Health KwaZulu-Natal



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM 149/12
Enquiries : Mr X Xaba
Tel : 033 – 395 2805

Dear Mrs S. Ramkilowan

Subject: Approval of a Research Proposal

1. The research proposal titled '**Exploring the attrition of student nurses from a 4 year comprehensive basic nursing education programme in a selected college of nursing in KZN: a case study**' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby **approved** for research to be undertaken at Greys and Ngwelezane Nursing campuses of the KZN College of Nursing.

2. You are requested to take note of the following:
 - a. Make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely



Dr E Lutge

Chairperson, Health Research Committee

Date: 10/10/2012

uMnyango Wezempilo . Departement van Gesondheid

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